Department of the Army Pamphlet 350–38

Training

Standards in Weapons Training

Headquarters
Department of the Army
Washington, DC
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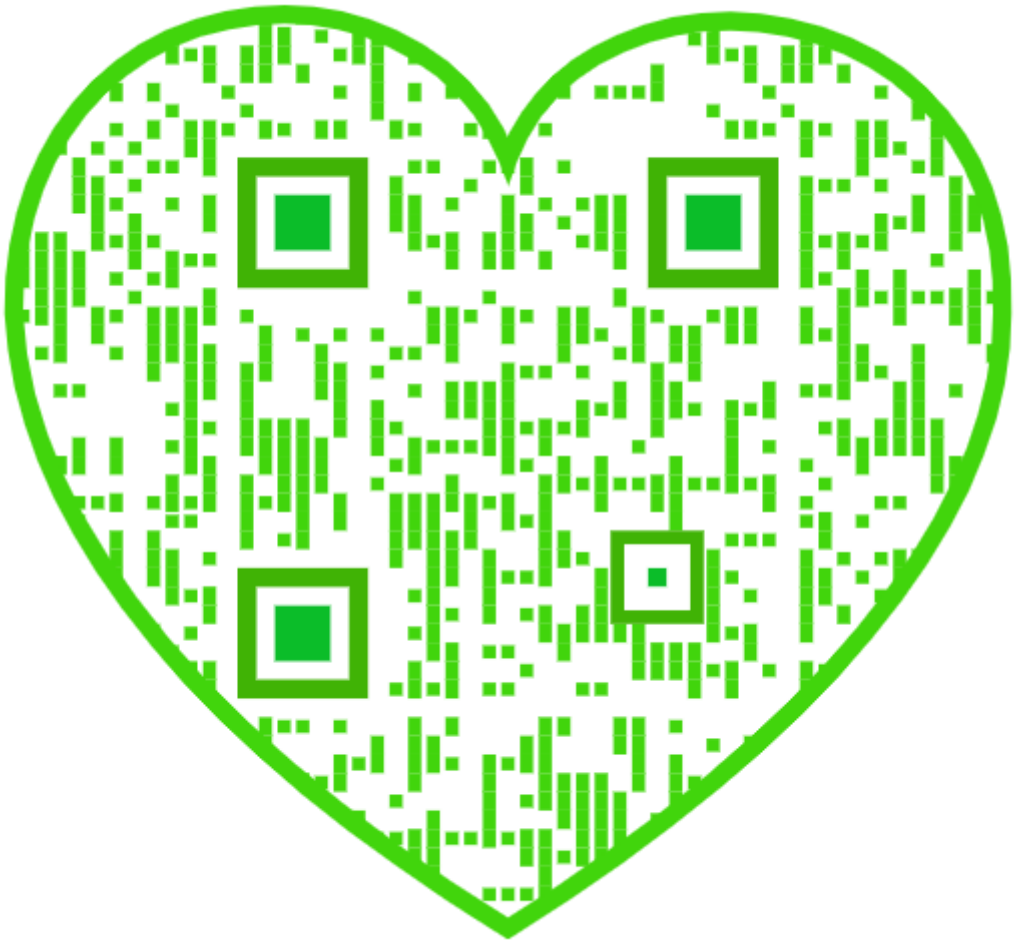

SUMMARY of CHANGE

DA PAM 350–38
Standards in Weapons Training

This revision--

- Reflects training ammunition requirements more closely aligned with actual historical expenditures and strategies that fall within acceptable risk levels. (throughout)

- Creates training programs, standards and strategies for training readiness condition (TRC)-B units.

- Deletes light antitank weapon (LAW) training standards and strategies for TRC-A, B and C units.

- Deletes the M60A3 main battle tank. (chap 2)

- Splits the live-fire matrix into current and advanced live-fire matrices. (chap 2)

- Deletes M1 Abrams tank from TRC-A units. (chap 2)

- Deletes M551A2 Sheridan tank from TRC-A units. (chaps 2 and 10)

- Deletes tank precision gunnery inbore device (TPGID) and eye-safe system for the laser rangefinder (ESSLR) from training strategies. (chap 2)

- Incorporates thru-sight video (TSV) and eye-safe laser filter (ELF) into training strategies. (chap 2)

- Replaces GuardFIST I with Abrams full-crew integrated simulation trainer (FIST) I. (chap 2)

- Creates new training strategy for multiple launch rocket system (MLRS) TRC-C units. (chap 3)

- Revises tables for 105-mm Howitzer(HOW) units. (chap 3)

- Deletes Vulcan, Chaparral and Hawk weapon systems. (chap 4)

- Incorporates remotely piloted vehicle target system (RPVTS), infrared towed target (IRTT), M160, infrared (IR) pole target, scoring augmentation and TRX-4A into training strategies. (chap 4)

- Deletes CIQ-121-A and AN/TPQ-29 from training strategies. (chap 4)

- Creates training standards and strategies for Patriot TRC-C units. (chap 4)

- Revises training standards and strategies for Bradley Stinger fighting vehicle (BSFV) units. (Chap 4/5)

- Revises training strategies for man portable air defense system (MANPADS), Patriot and Avenger units. (chap 4)

- Deletes 90-mm recoilless rifle (RCLR) and M202 from training standards and strategies. (chap 5)

- Adds training program for Bradley units with the precision gunnery system (PGS). (chap 5)

- Incorporates the M240B machine gun into training standards and strategies. (chap 5)

- Incorporates the M82A1 sniper rifle into TRC-A training standards and strategies. (chap 5)

- Creates training standards and strategies for the Bradley fire support vehicle. (chap 5)

- Creates training standards and strategies for the Javelin. (chap 5)

- Revises training strategy for Bradley fighting vehicle (BFV), cavalry fighting vehicle (CFV), and Bradley Stinger fighting vehicle (BSFV) TRC-A/C units. (chap 5)

- Increases pistol ammunition requirements for Criminal Investigations Division (CID) units. (chap 5)

- Incorporates MK 19 (Category I) training strategy into Military Police (MP) units. (chap 5)

- Incorporates M2 caliber .50 (Category I) training strategy into Engineer (EN) units. (chap 5)

- Deletes M249 light machine gun training strategies. (chap 5)

- Creates modernized demolition initiators (MDI) training standards and strategies. (chap 6)

- Deletes M180 cratering kit from training standards and strategies. (chap 6)

- Deletes electric initiating and detonating assembly. (chap 6)

- Deletes M14 mine from training standards and strategies. (chap 6)

- Revises training standards and strategy for M16AP mine. (chap 6)

- Creates training standards and strategies for wide area mines (WAM) and selected lightweight attack munitions (SLAM). (chap 6)

- Incorporates Presidential Decision Directive (PDD 48) restricting the use of conventional anti-personnel mines. (chap 6)

- Revises AH-64 and OH-58D program standards. (chap 7)

- Deletes AH-1 P/S units. (chap 7)

- Revises AH-64, AH-1 and OH-58D training strategies. (chap 7)

- Revises door gunner training strategies for UH-1, UH-60 and CH-47 units. (chap 7)

- Creates explosive ordnance disposal (EOD) training standards and strategy. (chap 8)

- Increases Group 1 and 2 unit pyrotechnics requirements strategies. (chap 8)

- Redefines contents and approach to mobilization training ammunition requirements. (chap 9)

- Adds training ammunition for aviation live-fire exercises. (chap 10)

- Adds training ammunition for live-fire exercises at combat maneuver training center. (chap 10)

Headquarters
Department of the Army
Washington, DC
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Training

Standards in Weapons Training

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the Secretary of the Army

History. This publication was originally printed on 30 September 1993; this printing publishes a revision.

Summary. This pamphlet contains policy and procedures for planning, resourcing, and executing training. It includes weapon qualification standards, suggested training programs, and ammunition requirements needed to attain and sustain weapon proficiency. These programs incorporate training devices and simulators.

Applicability. This pamphlet applies to the Active Army, the Army National Guard and the U.S. Army Reserves. This publication applies during partial and full mobilization.

Proponent and exception authority. The proponent of this pamphlet is the Deputy Chief of Staff for Operations and Plans (DCSOPS). The DCSOPS has the authority to approve exceptions to this pamphlet that are consistent with controlling law and regulation. The DCSOPS may delegate this authority, in writing, to a division chief within the proponent agency or a field operating agency in the grade of colonel or the civilian equivalent.

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to HQDA (DAMO-TRS), Washington, DC 20310-0450.

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Glossary

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Chapter 1
Introduction

Section I
Overview

1–1. Purpose

a. This pamphlet provides Department of the Army (DA) requirements for weapon training programs as stated in Army Regulation (AR) 350-41, Army Forces Training. It applies to the weapons and weapon systems used throughout the force for both Active and Reserve Components. Included are gunnery training programs consisting of: standards for qualification; suggested training strategies for individuals and collective elements (such as crews, teams, squads, and batteries.) to achieve those standards; and ammunition requirements to execute the suggested training strategies. The ammunition requirements are based on suggested strategies but do not automatically translate into authorizations. Training aids, devices, simulators and simulations (TADSS) systems should be used in addition to training ammunition to achieve standards.

b. The Army training goal is a combat-ready force prepared to mobilize and deploy on short notice, and to fight and win. To help achieve that goal, this pamphlet—

(1) Provides a link between proponent developed combined arms training strategies (CATS), standards in weapons training, TADSS, other training materials and training ammunition requirements.

(2) Provides commanders and other unit trainers with a common set of qualification standards for weapons and weapon systems.

(3) Provides commanders and other unit trainers with suggested weapon training strategies and ammunition requirements that assist in the attainment and sustainment of standards.

(4) Provides commanders with measurable standards for evaluating a portion of their overall training readiness.

(5) Provides commanders and other unit trainers information necessary to forecast annual ammunition requirements.

1–2. References

Required and related publications are listed in appendix A.

1–3. Explanation of abbreviations

Abbreviations used in this pamphlet are explained in the glossary.

1–4. Training functions

a. The Assistant Secretary of the Army (Research, Development and Acquisition) ASA(RDA) manages the research, development and procurement of ammunition items.

b. The Deputy Chief of Staff for Operations and Plans (DCSOPS)—

(1) Trains Army Forces and chairs the Standards in Training Commission (STRAC).

(2) Advises the Chief of Staff, Army and Vice Chief of Staff, Army on STRAC matters.

c. The Director of Training, Office of the DCSOPS (HQDA, DAMO-TR)—

(1) Acts on behalf of the DCSOPS as the Headquarters, Department of the Army (HQDA) point of contact for standard training programs and chairs the STRAC General Officer Steering Committee.

(2) Prescribes policy, coordinates standards in training requirements, and develops training ammunition requirements.

(3) Prescribes criteria for, and designates units at, training readiness condition (TRC) levels.

(4) Monitors STRAC training programs.

(5) Resources the Army component of combat training centers with ammunition separately from units.

d. The Deputy Chief of Staff for Logistics manages transportation and storage of ammunition required to support the training programs.

e. The Commanding General, US Army Training and Doctrine Command (CG, TRADOC)—

(1) Develops, standardizes and evaluates standards and training strategies.

(2) Staffs weapons training strategies through the STRAC General Officer Steering Committee for publication.

(3) Implements standards in training programs in the training base, where applicable.

(4) Determines annual training ammunition requirements for the training base, according to standard training programs.

f. Commanders of major army commands (MACOM)—

(1) Train forces to attain and sustain weapon proficiency standards.

(2) Determine annual training ammunition requirements and authorizations for assigned units, considering standards and notional (suggested) strategies in this pamphlet, unit mission, unit priority, and applicable resource guidance.

g. The National Guard Bureau (NGB) functions as a MACOM for administering resources, programs, policies, and plans pertaining to, or affecting, the Army National Guard in accordance with AR 130-5.

h. The United States Army Reserve Command (USARC) is responsible for administering resources, programs, policies, and plans pertaining to, or affecting, the United States Army Reserves in accordance with AR 140-1.

1–5. Training Readiness Conditions Levels and Categories

TRCs are training readiness levels with prescribed (mandatory) standards, notional training strategies, and generic (general, non-unit specific) training resource requirements (such as resources required by units to attain and sustain standards). In general, Active Component (AC) units are designated TRC A. Special reaction teams formed from active component military police units, are designated TRC S. National Guard Enhanced Brigade units are designated TRC B. USAR training divisions, USAR reception stations, USAR separate training brigades and NGB training cadre are designated TRC D. All other Reserve Component (RC) units are designated TRC C.

Section II
Army Standard Gunnery Training Programs

1–6. The Standards in Training Commission

In March 1982, the Vice Chief of Staff, Army (VCSA) established the STRAC, appointing the DCSOPS as chairman and TRADOC, Army Training Support Center (ATSC) as the Army Executive Agent. The mission is to determine the quantities and type of munitions for soldiers, crews, and units to attain and sustain weapon proficiency relative to readiness levels making maximum use of TADSS and subcaliber firing.

1–7. Management

The STRAC chairman directs the program and reports directly to the VCSA. The chairman is supported by the STRAC General Officer Steering Committee with membership from the Army staff (AC and RC), MACOMs, TRADOC and the commandants of the proponent schools. The training steering committee reviews the program and provides recommendations to the chairman. Weapon committees chaired by the commandants of the Air Defense, Armor, Aviation, Engineer, Field Artillery and Infantry Schools, with full MACOM representation, develop weapon training standards and strategies. These standards and strategies are integrated and reviewed by a STRAC Council of Colonels chaired by DAMO-TR, then forwarded to the Training General Officer Steering Committee for final recommendation.

1–8. Weapon System Training Programs

a. Table 1-1 identifies weapons and weapon systems by unit for which training programs have been written and approved. This unit listing is general in nature. Unit commanders must take into account their unit's mission, training, resource guidance and resource authorization when determining what training programs to follow. Commanders must examine each strategy as it applies to the unit's

modification table of organization and equipment (MTOE), mission-essential task list (METL), training level, time available, and unique training needs. Consideration must include the unit's overall training program and objectives as specified by the soldier's manual (SM), common task test (CTT), Army Training And Evaluation Program (ARTEP), mission training plan (MTP) and availability of TADSS.

b. Chapters 2 through 7 contain standards, strategies, and ammunition requirements for attaining and maintaining proficiency of soldiers, crews, and units in gunnery skills. Chapter 8 describes pyrotechnic requirements. Chapter 9 provides standards, strategies, and ammunition requirements for mobilization. Chapter 10 provides standards, strategies, and ammunition requirements for combat training center rotations.

(1) The standards listed throughout each chapter are mandatory.

(2) Training strategies and associated ammunition requirements are not mandatory. The STRAC strategies provided are models. Commanders may tailor strategies, as required, to allow their units to achieve standards. This flexibility in the strategies is intended to accommodate unique mission training requirements.

(3) This pamphlet reflects total training ammunition authorizations by type units.

c. Active Component (AC) table of distribution and allowances (TDA) units with assigned individual weapons will use weapon standards for Category II, TRC A. Reserve Component (RC) TDA units with assigned individual weapons will use weapon standards for Category II, TRC C. Personnel assigned pistols or revolvers in AC and RC TDA units will use weapon standards for TRC A and C respectively. Personnel in TDA units who are not assigned individual weapons are exempt from weapon qualification in accordance with AR 350-41.

d. Upon mobilization, TRC C commanders will reinforce/build upon their accomplished training by completing individual and collective training events as outlined in Chapter 9.

1–9. Standards and Strategies for TRC D.

a. Standards and strategies for the USAR Training Divisions, Separate USAR training brigades and NGB training cadre appear in this pamphlet as "TRC D USAR training battalion."

b. USAR training programs support both initial entry and prior-service personnel.. TRC D training programs in this manual support and accommodate the USAR phased qualification/sustainment program by basing training ammunition on the number of soldiers in each phase, instead of the number of weapons in the unit's MTOE/TDA.

c. For individual weapon qualification, all personnel, except instructors and drill sergeants involved in marksmanship instruction, will follow TRC C Category II programs. Soldiers assigned as track commanders/instructors in Infantry or Scout advanced individual training (AIT) or one-station unit training (OSUT) units are considered to be instructors when determining resources and the attainment of standards.

d. The ammunition requirements for USAR training battalions are located in the specific weapon system tables.

Table 1–1
Weapon System Training Programs

		Type Unit							
Proponent	System	AD	AR	AV	CAV	CS/CSS	EN	FA	IN
Armor	M1 Tank		X		X				
	M1A1/M1A2 Tank		X		X				
Field Artillery	105-mm Howitzer							X	
	155-mm Howitzer							X	
	155-mm Howitzer (Cav)				X				
	155-mm Howitzer (LID)							X	
	203-mm Howitzer							X	
	OH-58D (AFSC)							X	
	MLRS							X	
Air Defense	MANPADS	X							
	Patriot	X							
	BSFV	X							
	Avenger	X							
Infantry	BFV (M2/M3)		X		X				X
	BSFV	X							
	Bradley fire support vehicle							X	
	Improved TOW vehicle (M901)		X		X				X
	TOW (ground)		X		X				X
	Dragon (M47)		X		X		X		X
	AT-4	X	X	X	X	X	X	X	X
	Javelin		X		X				X
	LAW (M72)[1]	X	X	X	X	X	X	X	X
	60-mm mortar								X
	81-mm mortar								X
	107-mm mortar		X		X				X
	120-mm mortar		X		X				X
	Rifle (M16A1/A2)	X	X	X	X	X	X	X	X
	Rifle (M21)								X
	Shotgun [2]								
	Grenade launcher (M203)	X	X	X	X	X	X	X	X
	Machine gun (M60)	X	X	X	X	X	X	X	X
	Machine gun (M240B)		X						X
	Machine gun (M2 HB)	X	X	X	X	X	X	X	X
	Machine gun (MK 19)	X			X	X			X
	Squad automatic rifle (M249)	X	X		X		X		X

Table 1–1
Weapon System Training Programs—Continued

Proponent	System	Type Unit AD	AR	AV	CAV	CS/CSS	EN	FA	IN
	Submachine gun (M3A1)		X		X	X	X	X	X
	Revolver (.38 Cal)			X	X	X			
	Pistol (.45 Cal)	X	X	X	X	X	X	X	X
	Pistol (9-mm)	X	X	X	X	X	X	X	X
	Hand grenades (M228/M67)	X	X	X	X	X	X	X	X
	Sniper rifle (M82A1)						X		X
	Claymore mine (M18A1)	X	X	X	X	X	X	X	X
Engineer	M14AP		X		X	X	X	X	X
	M15AT		X		X	X	X	X	X
	M16AP		X		X	X	X	X	X
	M19AT		X		X	X	X	X	X
	M21AT		X		X	X	X	X	X
	Flipper						X		
	GEMSS						X		
	MOPMS		X		X		X		
	Volcano			X			X		
	Demolitions	X	X		X		X	X	X
	Bangalore torpedo		X		X		X		X
	MICLIC						X		
	Shape charge/cratering charge						X		
Aviation	AH-64			X	X				
	AH-1E			X	X				
	AH-1F			X	X				
	UH-1H (door gunnery)			X	X				
	UH-60 (door gunnery)			X	X				
	CH-47 (door gunnery)			X					
	OH-58 (armed)			X	X				

Notes:
[1] The M72 LAW should be used only when the AT4 is not available for use or when range restrictions require it. When firing the LAW, use the AT4 Training Strategy.
[2] The Shotgun program provides a training strategy and ammunition resources for instructional fire to soldiers assigned a shotgun.

Chapter 2
Armor Weapon Systems

Section I
Introduction

2–1. Standards, strategies, and requirements

a. This chapter provides weapon standards, training strategies, and resource requirements for the M1, M1A1, and M1A2 tanks. The training programs provided have been specifically designed for each weapon system at four different TRC levels, as appropriate. Each program contains a standard and suggested strategy that outlines the training sequence, including frequencies for using devices, live fire, and subcaliber fire. Table 2-1 is an index of weapons and weapon systems for which training programs have been written and approved.

b. The objective is to assist field commanders to attain and sustain the standards as stated for each TRC and to ensure acceptable levels of weapon proficiency throughout all Armor and Cavalry units.

c. The training strategies in this chapter are based on exercises in the FM 17-12-series manuals and coordination with Armor units worldwide. The specifics of each exercise will not be presented here; the appropriate manual must be consulted.

2–2. Training Aids, Devices, Simulators And Simulations (TADSS)

a. Objective. The objective of training devices is to increase combat readiness by providing greater, more effective training opportunities while saving or avoiding training costs.

b. General. The use of training devices, such as the unit conduct of fire trainer (U-COFT), allows tank commanders and gunners to train beyond current constrained training levels while taking full advantage of the tank's combat capability. TADSS increases combat readiness, standardization, and retention of knowledge while reducing costs (such as time, range facilities, Class III, Class V, and Class IX).

c. Specific Armor training devices and simulators. The devices and simulators described in *d*. through *o*. below are an integral part of the training strategies. Main gun ammunition allocations are based on their use as presented in the strategies.

d. Conduct-of-fire trainer (COFT). The COFT (for M1 and M1A1) and the advanced gunnery training simulator (AGTS) (for M1A2) enable the training of tank commander (TC) and gunner (GNR) teams on simulated target engagements without using a tank. These devices provide training on engagements equivalent to those found in the FM 17-12-series gunnery tables as well as more advanced training scenarios. COFT minimum proficiency level goals for AC are listed in (1) through (6) below and those for RC (7).

(1) New crews training toward the minimum proficiency level must be given priority for COFT training time. It is imperative that new crews receive approximately 10 hours of intensive training when initially entering the COFT training matrix. The goal is to complete Reticle Aim Group 2 of the COFT matrix during the first week of COFT training.

(2) After a crew completes Reticle Aim Group 2, its training time may be four to six hours per month until certification is achieved. At this frequency, crews should attain the following proficiency levels in the time frame shown.

- Complete Reticle Aim Group 3—3 to 4 months.
- Complete Reticle Aim Group 4—5 to 7 months.
- Complete Reticle Aim Group 5—6 to 9 months.
- TC/GNR certification—8 to 12 months.

(3) COFT Prerequisites for live fire: current matrix.

(a) TC/GNR teams should complete Reticle Aim Group 3 in lieu of Gunnery Tables I and II.

(b) TC/GNR teams should progress through the current matrix and complete exercise 33521 (Reticle Aim 30) prior to conducting main gun live fire. This training sequence ensures the TC/GNR team has mastered all the U-COFT skills related to range firing. If the crew cannot complete the normal progression to Reticle Aim level 30, the crew should, at a minimum, complete the following individual exercises: 21241, 22211, 31211, 32421, 33221, 33311, 33331, 33461, 33511, 33521.

(c) Zeroing and calibration. All teams should complete special purpose exercises 11141, 11142 and 11143 prior to starting coax and main gun live-fire tables. These exercises reinforce skills in boresighting, zeroing and calibrating tank weapon systems.

(4) *COFT Prerequisites for live fire: Advanced Matrix.*

(a) New crews/teams should progress through the current matrix and complete Reticle Aim 15 under the current matrix prior to transitioning to the Advanced Matrix system in the U-COFT. The crew will complete exercises 101 through 120 using the U-COFT and conduct a gate test selected at random by the computer (exercises 130-145). Completing a gate exercise ensures the crew has mastered the U-COFT skills related to range firing.

(b) Sustainment crews will fire the following exercises:

- Combat Gunnery Skills—201-214.
- Advanced Combat Gunnery Skills—301-314.
- Sustainment Gunnery Skills—401-412.

(5) COFT Prerequisites for live fire: AGTS

(a) AGTS uses the M1/M1A1 U-COFT system *current matrix*. Therefore, the same guidelines used for the M1 apply to the AGTS.

(b) The Advanced Matrix for the AGTS will be the same as the Advanced Matrix for the M1A1. The same guidelines and standards used for the M1A1 will apply to AGTS Advanced Matrix.

(6) Scheduling. Priority for training time with U-COFT should go to crews below Reticle Aim Group 3.

(7) Minimum proficiency level goal for the Reserve Component. Crews should complete Reticle Aim Group 2 by using concentrated mobile conduct-of-fire trainer (M-COFT) training. This allows crews to adjust to the device and build their skills to a level that assures retention. M-COFT should also be integrated with other training devices such as Abrams full-crew integrated simulator (Abrams FIST I), videodisc gunnery simulator (VIGS) or TWGSS/TSV to work on identified skill weaknesses (such as target hand off, tracking, and range estimation). Use COFT for training Gunnery Tables I, II, and III and to prepare for follow-on M-COFT sessions.

e. Tank weapons gunnery simulation system (TWGSS). TWGSS is a vehicle-appended precision gunnery training system that simulates main gun and coax machine gun fire for the M1, M1A1, and M1A2 tanks. It interfaces with the vehicle fire control system and permits precision and degraded-mode gunnery while accommodating factors as such lead, superelevation, range, and ammunition type. A simulated tracer and impact burst is superimposed in the sight precisely as the actual round would fly and impact. Further, TWGSS provides printed hard copy feedback of gunner performance for an after-action review (AAR). TWGSS is compatible with multiple integrated laser engagement system (MILES) and may also be used during maneuver training to reinforce gunnery.

f. Thru-sight video (TSV). TSV is a vehicle-appended system that records crew audio and the gunner's sight picture on Abrams-series tanks and Bradley-series vehicles. The system consists of an on-vehicle video and audio recording package and an off-vehicle AAR substation. The system makes a video recording of the gunner's sight picture. It shows the date and time and marks the video at the instant the trigger is activated.

g. Scaled range target system (SRTS). The SRTS provides targets for use with sub-caliber training devices on 1:60, 1:30, 1:10, and 1:5 scale ranges. The system supports tank Gunnery Tables I, II, and defensive exercises on Gunnery Tables III, IV, and XI as described in the FM 17-12-series manuals.

h. Telfare. The Telfare sub-caliber device provides a means of training crew interaction and precision gunnery techniques. Telfare uses a tank-appended bracket to mount a .50 caliber M2 heavy barrel (HB) machine gun that fires single shots against full scale targets. This device supports tank Gunnery Tables III, IV, VI, VII, IX and XI, as described in the FM 17-12-series manuals. The Telfare device is not used when TWGSS is available.

i. Target holding mechanism, tank gunnery (THMTG). The THMTG is a full-scale target lifting mechanism used to provide pop-up targets to support the tank gunnery tables described in the FM 17-12-series manuals.

j. Laser target interface device (LTID). The LTID permits TWGSS or MILES laser beams to activate target scoring mechanisms.

k. Eye-safe filter (ELF) for M1 series. The ELF permits total eye-safe training using the tank's laser range finder. ELF provides tank crews with the capability to use the laser range finder during training in garrison areas, performance of preventive maintenance checks and services and force-on-force training with TWGSS or MILES.

l. Tank videodisc gunnery simulator. The VIGS provides RC units a means for gunners to familiarize with the controls, indicators, and fire commands required to engage various target scenarios. VIGS provides a means to orient new gunners and sustain basic gunnery skills in the armory at home station.

m. Caliber .50 tank inbore subcaliber device. The Caliber .50 tank inbore subcaliber device is used on M1 and M1A1 tanks to engage full-scale and half-scale targets on a full-scale range. This device consists of a bolt-action, single-shot, rifle-type breech mechanism that attaches to a modified M2 machine gun barrel mounted inside a 105-mm/120-mm gun tube.

n. Abrams full-crew integrated simulation trainer (Abrams FIST I). Abrams FIST I is a tank-appended training device for use by ARNG components in their local armories. Abrams FIST I provides interactive, full-crew M1 and M1A1 tank training procedures.

o. Multiple integrated laser engagement system (MILES). MILES provides a means to train and sustain combat skills in a realistic force-on-force environment using actual equipment. It does not train precision gunnery. TWGSS will not replace MILES for force-on-force training.

Section II
Training Programs

2–3. General

Training programs have been developed for each TRC level. Armor weapon systems training programs are identified in table 2-1. The standard is stated at the beginning of each program. The tank crew training strategy is given first; tank platoon training follows. Proficiency is achieved through the use of virtual simulation (such as COFT and Abrams FIST) and live simulation (such as TWGSS, TSV and full-caliber ammunition). *Ammunition resources for each TRC level are discussed at the conclusion of each training program.* These programs are based on the assumption that training events will be spaced at uniform intervals throughout the training year.

2–4. Purpose and objective of the training programs

Training programs provide a method to attain and sustain weapon proficiency throughout the training year. They ensure all crews and platoons in a battalion or squadron are adequately trained and able to sustain weapon proficiency.

2–5. Program for M1 tank units

M1 tanks are fielded only to Army National Guard units at TRC C level. Therefore, there are no standards and strategies for TRC A and B for M1 tank units.

a. Standard. TC/GNR combination will conduct M-COFT training every other month (battalion average four hours per crew every other month). Crews will conduct Gunnery Table IV/Tank Crew Proficiency Course (TCPC) sustainment training at least twice per gunnery year and once per maneuver year. Crews will conduct

Gunnery Table VIII once every two years. The goal is for all crews to qualify on this table. The minimum standard is 75 percent of the assigned crews to qualify on this table.

b. Training strategy. The ammunition requirements for crew/platoon and unit training strategies are given in tables 2-2 through 2-4 (gunnery year) and 2-5 through 2-7 (maneuver year). Units equipped with TWGSS will use table 2-8 through 2-13. Combat training of Reserve units is accomplished through the execution of a 3-phase interlocking training strategy that consists of garrison training area, local training area (LTA), and major training area (MTA) events. Basic skills are taught at the garrison level through the use of the VIGS, Abrams FIST I, M-COFT and TWGSS. Intermediate skills, taught in the LTA, include execution of Gunnery Table IV/TCPC using TWGSS or limited subcaliber training (if the LTA facility supports subcaliber firing). Qualification is conducted at the MTA. The unit training strategy is outlined in tables 2-2 through 2-13.

2–6. Program for M1A1 and M1A2 tank units

a. TRC A. Active Component Units.

(1) *Standard.* Crews will conduct Gunnery Table IV/TCPC semiannually using TWGSS. The goal is for all crews to qualify on Gunnery Table VIII and Gunnery Table XII. The minimum standard at the conclusion of each of the two gunnery densities provided by the notional strategy is 85 percent of the assigned crews to qualify through Gunnery Table VIII. A qualified crew is a Tank commander and gunner combination that has met Gunnery Table VIII standards together within the past 12 months. All crews firing Gunnery Table XII must be qualified on Gunnery Table VIII. Platoons will conduct Gunnery Table XII at least once a year. The qualification levels are—

(a) Ten of 12 platoons in a tank battalion.

(b) Seven of 9 tank platoons in an Armored Cavalry Regiment (ACR).

(c) Four of 6 tank platoons in a divisional Cavalry squadron.

(2) *Training strategy.* The ammunition requirements for crew/platoon and unit training strategies are given in table 2-15 through 2-17. Units equipped with TWGSS will use tables 2-27 through 2-29 which reflect a decremented 10 main gun round strategy from non-TWGSS equipped units. Recommend unit commanders and master gunners take the 10-round decrement from Gunnery Table VII. It is the commander's call which engagements are deleted from Gunnery Table VII based on their METL and mission, enemy, troops, terrain, time, and weather (METT-T).

b. TRC B, Enhanced Brigades.

(1) *Standard.* Crews will conduct Gunnery Table IV/TCPC semi-annually. The goal is for all crews to qualify on Gunnery Table VIII. The minimum standard at the conclusion of the annual gunnery density described in the gunnery strategy is 85 percent of the assigned crews to qualify on Gunnery Table VIII. A qualified crew is a tank commander and gunner combination that met Gunnery Table VIII standards together within the past 12 months.

(2) *Training strategy.* The ammunition requirements for crew and unit training strategies are given in table 2-18 through 2-20. Units equipped with TWGSS will use table 2-30 through 2-32. Combat training of RC units is accomplished through the execution of a 3-phase Interlocking training strategy that consists of: garrison training area, LTA and MTA. Basic skills are taught at the garrison level using the VIGS, Abrams FIST I, M-COFT and TWGSS. The M1A1 M-COFT utilization strategy is provided in Fort Knox Supplemental Material (FKSM) 17-12-7-1. Intermediate skills, including execution of TCPC using TWGSS or limited subcaliber training (if the LTA facility will support firing subcaliber), are taught in the LTA. Qualification is conducted at the MTA.

c. TRC C, other RC units

(1) *Standard.* Crews (TC/GNR combinations) will conduct M-COFT training every other month (battalion average four hours per crew every other month). Crews will conduct TCPC at least twice per gunnery year and once per maneuver year. Crews will conduct Gunnery Table VIII once every 2 years. The goal is for all crews to qualify on Gunnery Table VIII. The minimum standard is 75 percent of the assigned crews to qualify on this table.

(2) *Training strategy.* The ammunition requirements for crew and unit training strategies are given in tables 2-21 through 2-23 (gunnery year) and 2-24 through 2-26 (maneuver year). Units equipped with TWGSS will use table 2-33 through 2-35 (gunnery year) and 2-36 through 2-38 (maneuver year). Combat training of RC units is accomplished through the execution of a 3-phase interlocking training strategy that consists of garrison training area, LTA and MTA events. Basic skills are taught at the garrison level through the use of the VIGS, Abrams FIST I, M-COFT and TWGSS. The M1A1 M-COFT utilization strategy is provided in FKSM 17-12-7-1. Intermediate skills are taught in the LTA to include execution of TCPC using TWGSS or limited subcaliber training (if the LTA facility will support subcaliber firing). Qualification is conducted at the MTA.

d. TRC D (USAR Training Battalion.)

(1) *Standard.* All Military Occupational Specialty (MOS) 19K will participate in gunnery training according to the phased training program outlined below:

(a) Phase I (skill levels (SL) 1/2 Qualification)

1. No prior service: Graduates of one-station unit training (OSUT).

2. Prior service: Graduates of 19K10/20 reclassification course.

(b) Phase II (SL 3 qualification): Graduates of 19K Basic Noncommissioned Officer Course (BNCOC) RC.

(c) Phase III (sustainment training). Each tank commander will participate in annual sustainment training outlined in table 2-14. Crews for these tank commanders will be formed from available cadre. Whenever possible, SL 1 and 2 personnel will be used as crew members. This training will provide their primary MOS-specific gunnery training.

(2) *Ammunition requirements.* Ammunition requirements for sustainment are based on the individual tank commander to be trained. These requirements are given in table 2-14.

Table 2–1
Weapons Systems Training Index

Armor weapon/weapon system	Paragraph	Table
M1—Divisional Cavalry Squadron (44) TRC C Gunnery Year	2-5a	2-2
M1—Armored Cavalry Squadron (44) TRC C Gunnery Year	2-5a	2-3
M1—Tank Battalion (44) TRC C Gunnery Year	2-5a	2-4
M1—Divisional Cavalry Squadron (22) TRC C Maneuver Year	2-5a	2-5
M1—Armored Cavalry Squadron (22) TRC C Maneuver Year	2-5a	2-6
M1—Tank Battalion (22) TRC C Maneuver Year	2-5a	2-7

Table 2–1
Weapons Systems Training Index—Continued

Armor weapon/weapon system	Paragraph	Table
M1—Divisional Cavalry Squadron w/TWGSS (39) TRC C Gunnery Year	2-5a	2-8
M1—Armored Cavalry Squadron w/TWGSS (39) TRC C Gunnery Year	2-5a	2-9
M1—Tank Battalion w/TWGSS (39) TRC C Gunnery Year	2-5a	2-10
M1—Divisional Cavalry Squadron w/TWGSS (17) TRC C Maneuver Year	2-5a	2-11
M1—Armored Cavalry Squadron w/TWGSS (17) TRC C Maneuver Year	2-5a	2-12
M1—Tank Battalion w/TWGSS (17) TRC C Maneuver Year	2-5a	2-13
M1A1/M1A2—USAR Battalion TRC-D	2-5b	2-14
M1A1/M1A2—Divisional Cavalry Squadron (100) Units TRC A	2-6a	2-15
M1A1/M1A2—Armored Cavalry Squadron (100) Units TRC A	2-6a	2-16
M1A1/M1A2—Tank Battalion (100) Units TRC A	2-6a	2-17
M1A1/M1A2—Divisional Cavalry Squadron (44) Units TRC B	2-6b	2-18
M1A1/M1A2—Armored Cavalry Squadron (44) Units TRC B	2-6b	2-19
M1A1/M1A2—Tank Battalion (44) Units TRC B	2-6b	2-20
M1A1/M1A2 —Divisional Cavalry Squadron (44) TRC C Gunnery Year	2-6c	2-21
M1A1/M1A2—Armored Cavalry Squadron (44) TRC C Gunnery Year	2-6c	2-22
M1A1/M1A2—Tank Battalion (44) TRC C Gunnery Year	2-6c	2-23
M1A1/M1A2 —Divisional Cavalry Squadron (22) TRC C Maneuver Year	2-6c	2-24
M1A1/M1A2—Armored Cavalry Squadron (22) TRC C Maneuver Year	2-6c	2-25
M1A1/M1A2—Tank Battalion (22) TRC C Maneuver Year	2-6c	2-26
M1A1/M1A2—Divisional Cavalry Squadron w/TWGSS (90) TRC A	2-6a	2-27
M1A1/M1A2—Armored Cavalry Squadron w/TWGSS (90) TRC A	2-6a	2-28
M1A1/M1A2—Tank Battalion w/TWGSS (90) TRC A	2-6a	2-29
M1A1/M1A2—Divisional Cavalry Squadron w/TWGSS (39) TRC B	2-6b	2-30
M1A1/M1A2—Armored Cavalry Squadron w/TWGSS (39) TRC B	2-6b	2-31
M1A1/M1A2—Tank Battalion w/TWGSS (39) TRC B	2-6b	2-32
M1A1/M1A2—Divisional Cavalry Squadron w/TWGSS (39) TRC C Gunnery Year	2-6c	2-33
M1A1/M1A2—Armored Cavalry Squadron w/TWGSS (39) TRC C Gunnery Year	2-6c	2-34
M1A1/M1A2—Tank Battalion w/TWGSS (39) TRC C Gunnery Year	2-6c	2-35
M1A1/M1A2—Divisional Cavalry Squadron w/TWGSS (17) TRC C Maneuver Year	2-6c	2-36
M1A1/M1A2—Armored Cavalry Squadron w/TWGSS (17) TRC C Maneuver Year	2-6c	2-37
M1A1/M1A2—Tank Battalion w/TWGSS (17) TRC C Maneuver Year	2-6c	2-38
Other Weapon Systems		
M901 ITV	5-6	5-20
TOW (GND)	5-6	5-20
Dragon	5-6	5-21
AT-4 (CAT I, CAT II) Includes M72 LAW	5-6	5-23,5-24
M16A1/A2/M4 CAT II	5-9	5-39
M203 Grenade Launcher CAT II	5-9	5-44
M60/M240B MG CAT II	5-8	5-30
M2HB MG CAT II	5-8	5-33
M249 AR CAT II	5-8	5-37
M3A1 SMG	5-9	5-42
Pistol (M1911A1, M9)	5-9	5-46
Hand Grenade M228 CAT I, CAT II	5-9	5-47, 5-48

Table 2–1
Weapons Systems Training Index—Continued

Armor weapon/weapon system	Paragraph	Table
Claymore Mine M18 CAT I, CAT II	5-9	5-49, 5-50
Mines/Demoltions)	6-12, 6-23	6-28 to 6-34, 6-57 to 6-58

Table 2–2
Annual Training Strategy for M1 Divisional Cavalry Squadron (44) (TRC C) Gunnery Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0
III[1]	1	27	0	0	53	0	0	0	0	0
IV / TCPC	1	27	0	0	23	0	0	0	0	17
V	1	27	0	0	0	700	250	0	0	10
Screening	1	27	2	2	0	0	0	0	0	0
VI	1	27	0	0	14	0	50	0	0	12
VII	1	27	12	6	0	150	50	0	0	32
VIII	1	27	16	6	0	250	50	0	0	34
Unit training										
Sqdn FTX	0	27						0	0	0
Trp FTX	0	27						0	0	0
Plt FTX	1	24						400	100	18
Sqdn FCX	0	0								0
Trp FCX	0	0								0
Totals										
Div Cav Sqdn			810	378	2430	29700	10800	9600	2400	3267

Notes:
[1] Use M-COFT or Abrams FIST.

Table 2–3
Annual Training Strategy for M1 Armored Cavalry Squadron (44) (TRC C) Gunnery Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0
III[1]	1	41	0	0	53	0	0	0	0	0
IV/TCPC	1	41	0	0	23	0	0	0	0	17
V	1	41	0	0	0	700	250	0	0	10

Table 2–3
Annual Training Strategy for M1 Armored Cavalry Squadron (44) (TRC C) Gunnery Year—Continued

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
Screening	1	41	2	2	0	0	0	0	0	0
VI	1	41	0	0	14	0	50	0	0	12
VII	1	41	12	6	0	150	50	0	0	32
VIII	1	41	16	6	0	250	50	0	0	34
Unit training										
Sqdn FTX	0	41						0	0	0
Trp FTX	0	39						0	0	0
Plt FTX	1	36						400	100	18
Sqdn FCX	0	5								0
Trp FCX	0	3								0
Totals										
Armd Cav Sqdn			1230	574	3690	45100	16400	14400	3600	4953

Notes:
[1] Use M-COFT or Abrams FIST.

Table 2–4
Annual Training Strategy for M1 Tank Battalion (44) (TRC C) Gunnery Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0
III [1]	1	58	0	0	53	0	0	0	0	0
IV/TCPC	1	58	0	0	23	0	0	0	0	17
V	1	58	0	0	0	700	250	0	0	10
Screening	1	58	2	2	0	0	0	0	0	0
VI	1	58	0	0	14	0	50	0	0	12
VII	1	58	12	6	0	150	50	0	0	32
VIII	1	58	16	6	0	250	50	0	0	34
Unit training										
Bn FTX	0	58						0	0	0
Co FTX	0	56						0	0	0
Plt FTX	1	48						400	100	18
Bn FCX	0	22								0
Co FCX	0	20								0
Totals			1740	812	5220	63800	23200	19200	4800	6954

Notes:
[1] Use M-COFT or Abrams FIST.

Table 2–5
Annual Training Strategy for M1 Divisional Cavalry Squadron (22) (TRC C) Maneuver Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0
III[1]	1	27	0	0	53	0	0	0	0	0
IV/TCPC	1	27	0	0	23	0	0	0	0	17
V	1	27	0	0	0	700	250	0	0	10
Screening	1	27	2	2	0	0	0	0	0	0
VI	1	27	0	0	15	0	50	0	0	12
VII	1	27	12	6	0	150	50	0	0	32
VIII	0	27	0	0	0	0	0	0	0	0
Unit training										
Sqdn FTX	1	27						200	100	18
Trp FTX	1	27						400	100	36
Plt FTX	1	24						400	100	18
Sqdn FCX	1	3								8
Trp FCX	1	12								8
Totals										
Div Cav Sqdn			378	216	2457	22950	9450	25800	7800	3927

Notes:
[1] Use M-COFT or Abrams FIST.

Table 2–6
Annual Training Strategy for M1 Armored Cavalry Squadron (22) (TRC C) Maneuver Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0
III[1]	1	41	0	0	53	0	0	0	0	0
IV/TCPC	1	41	0	0	23	0	0	0	0	17
V	1	41	0	0	0	700	250	0	0	10
Screening	1	41	2	2	0	0	0	0	0	0
VI	1	41	0	0	15	0	50	0	0	12
VII	1	41	12	6	0	150	50	0	0	32
VIII	0	41	0	0	0	0	0	0	0	0
Unit training										
Sqdn FTX	1	41						200	100	18

Table 2–6
Annual Training Strategy for M1 Armored Cavalry Squadron (22) (TRC C) Maneuver Year—Continued

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
Trp FTX	1	39						400	100	36
Plt FTX	1	36						400	100	18
Sqdn FCX	1	5								8
Trp FCX	1	17								8
Totals										
Armd Cav Sqdn			574	328	3731	34850	14350	38200	11600	5877

Notes:
[1] Use M-COFT or Abrams FIST.

Table 2–7
Annual Training Strategy for M1 Tank Battalion (22) (TRC C) Maneuver Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A585	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0
III [1]	1	58	0	0	53	0	0	0	0	0
IV/TCPC	1	58	0	0	23	0	0	0	0	17
V	1	58	0	0	0	700	250	0	0	10
Screening	1	58	2	2	0	0	0	0	0	0
VI	1	58	0	0	15	0	50	0	0	12
VII	1	58	12	6	0	150	50	0	0	32
VIII	0	58	0	0	0	0	0	0	0	0
Unit training										
Bn FTX	1	58						200	100	18
Co FTX	1	56						400	100	36
Plt FTX	1	48						400	100	18
Bn FCX	1	22								8
Co FCX	1	20								8
Totals										
Tank Bn			812	464	5278	49300	20300	53200	16200	8378

Notes:
[1] Use M-COFT or Abrams FIST.

Table 2–8
Annual Training Strategy for M1 Divisional Cavalry Squadron w/TWGSS (39) (TRC C) Gunnery Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	0	0	0	0	0
TCPC	2	27	TWGSS	TWGSS	0	0	0	0	17
V	1	27	0	0	700	250	0	0	10
Screening	1	27	2	2	0	0	0	0	0
VI	1	27	TWGSS	TWGSS	0	50	0	0	12
VII	1	27	8	5	150	50	0	0	32
VIII	1	27	16	6	250	50	0	0	34
Unit training									
Sqdn FTX	0	27	TWGSS	TWGSS			0	0	0
Trp FTX	0	27	TWGSS	TWGSS			0	0	0
Plt FTX	1	24	TWGSS	TWGSS			400	100	18
Sqdn FCX	2	3	TWGSS	TWGSS					8
Trp FCX	2	12	TWGSS	TWGSS					8
Totals									
Div Cav Sqdn			702	351	29700	10800	9600	2400	3726

Table 2–9
Annual Training Strategy for M1 Armored Cavalry Squadron w/TWGSS (39) (TRC C) Gunnery Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	0	0	0	0	0
TCPC	2	41	TWGSS	TWGSS	0	0	0	0	17
V	1	41	0	0	700	250	0	0	10
Screening	1	41	2	2	0	0	0	0	0
VI	1	41	TWGSS	TWGSS	0	50	0	0	12
VII	1	41	8	5	150	50	0	0	32
VIII	1	41	16	6	250	50	0	0	34
Unit training									
Sqdn FTX	0	41	TWGSS	TWGSS			0	0	0
Trp FTX	0	39	TWGSS	TWGSS			0	0	0
Plt FTX	1	36	TWGSS	TWGSS			400	100	18
Sqdn FCX	0	5	TWGSS	TWGSS					0
Trp FCX	0	17	TWGSS	TWGSS					0

Table 2–9
Annual Training Strategy for M1 Armored Cavalry Squadron w/TWGSS (39) (TRC C) Gunnery Year—Continued

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
Totals									
Armd Cav Sqdn			1066	533	45100	16400	14400	3600	5650

Table 2–10
Annual Training Strategy for M1 Tank Battalion w/TWGSS (39) (TRC C) Gunnery Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	0	0	0	0	0
TCPC	2	58	TWGSS	TWGSS	0	0	0	0	17
V	1	58	0	0	700	250	0	0	10
Screening	1	58	2	2	0	0	0	0	0
VI	1	58	TWGSS	TWGSS	0	50	0	0	12
VII	1	58	8	5	150	50	0	0	32
VIII	1	58	16	6	250	50	0	0	34
Unit training									
Bn FTX	0	58	TWGSS	TWGSS			0	0	0
Co FTX	0	56	TWGSS	TWGSS			0	0	0
Plt FTX	1	48	TWGSS	TWGSS			400	100	18
Bn FCX	0	22	TWGSS	TWGSS					0
Co FCX	0	20	TWGSS	TWGSS					0
Totals									
Tank Bn			1508	754	63800	23200	19200	4800	7940

Table 2–11
Annual Training Strategy for M1 Divisional Cavalry Squadron w/TWGSS (17) (TRC C) Maneuver Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	0	0	0	0	0
TCPC	1	27	TWGSS	TWGSS	0	0	0	0	17
V	1	27	0	0	700	250	0	0	10
Screening	1	27	2	2	0	0	0	0	0

Table 2–11
Annual Training Strategy for M1 Divisional Cavalry Squadron w/TWGSS (17) (TRC C) Maneuver Year—Continued

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
VI	1	27	TWGSS	TWGSS	0	50	0	0	12
VII	1	27	8	5	150	50	0	0	32
VIII	1	27	TWGSS	TWGSS	250	50	0	0	34
Unit training									
Sqdn FTX	1	27	TWGSS	TWGSS			200	100	18
Trp FTX	1	27	TWGSS	TWGSS			400	100	36
Plt FTX	1	24	TWGSS	TWGSS			400	100	18
Sqdn FCX	1	3	TWGSS	TWGSS					8
Trp FCX	1	12	TWGSS	TWGSS					8
Totals									
Div Cav Sqdn			270	189	22950	9450	25800	7800	3927

Table 2–12
Annual Training Strategy for M1 Armored Cavalry Squadron w/TWGSS (17) (TRC C) Maneuver Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	0	0	0	0	0
TCPC	1	41	TWGSS	TWGSS	0	0	0	0	17
V	1	41	0	0	700	250	0	0	10
Screening	1	41	2	2	0	0	0	0	0
VI	1	41	TWGSS	TWGSS	0	50	0	0	12
VII	1	41	8	5	150	50	0	0	32
VIII	1	41	TWGSS	TWGSS	250	50	0	0	34
Unit training									
Sqdn FTX	1	41	TWGSS	TWGSS			200	100	18
Trp FTX	1	39	TWGSS	TWGSS			400	100	36
Plt FTX	1	36	TWGSS	TWGSS			400	100	18
Sqdn FCX	1	5	TWGSS	TWGSS					8
Trp FCX	1	17	TWGSS	TWGSS					8
Totals									
Armd Cav Sqdn			410	287	34850	14350	38200	11600	5877

Table 2–13
Annual Training Strategy for M1 Tank Battalion w/TWGSS (17) (TRC C) Maneuver Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C520	C511	A131	A557	A111	A598	L602
VIGS	12	0	0	0	0	0	0	0	0
M-COFT	6	0	0	0	0	0	0	0	0
Abrams FIST	12	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	0	0	0	0	0
TCPC	1	58	TWGSS	TWGSS	0	0	0	0	17
V	1	58	0	0	700	250	0	0	10
Screening	1	58	2	2	0	0	0	0	0
VI	1	58	TWGSS	TWGSS	0	50	0	0	12
VII	1	58	8	5	150	50	0	0	32
VIII	1	58	TWGSS	TWGSS	250	50	0	0	34
Unit training									
Bn FTX	1	58	TWGSS	TWGSS			200	100	18
Co FTX	1	56	TWGSS	TWGSS			400	100	36
Plt FTX	1	48	TWGSS	TWGSS			400	100	18
Bn FCX	1	22	TWGSS	TWGSS					8
Co FCX	1	20	TWGSS	TWGSS					8
Totals									
Tank Bn			580	406	49300	20300	53200	16200	8378

Table 2–14
Individual Training Strategy and Ammunition Requirements for M1A1/M1A2 USAR Training Battalion w/TWGSS (TRC D) (39)

Event/Table	Freq	TPCSDS-T	HEAT-TP-T	7.62-mm	Cal .50	7.62-mm Blank	Hoffman
DODIC		C785	C784	A131	A557	A111	L602
Phase I Reclass—RC	POI						
Phase II BNCOC—RC	POI						
III	1	TWGSS	TWGSS	0	0	0	0
IV	1	TWGSS	TWGSS	0	0	0	19
V	1			650	350	0	12
Screening	1	2	2	0	0	0	0
VI	1	TWGSS	TWGSS	50	0	200	12
VII	1	8	5	250	50	0	16
VIII	1	16	6	150	150	200	18
Annual Total per TC		26	13	1100	5500	400	77

Table 2–15
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron (100) (TRC A)

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0	0
TCPC	2	27	0	0	0	0	0	0	0	0	0	17
V	2	27	0	0	0	0	700	250	0	0	0	10
Screening	2	27	2	2	2	0	0	0	0	0	0	0
VI	2	27	0	0	0	14	0	50	0	0	0	12
VII	2	27	12	6	6	0	150	50	0	0	0	32
VIII	2	27	16	6	6	0	250	50	0	0	0	34
XI	1	27	0	0	0	15	300	125	0	0	0	20
XII[2]	1	27	12	0	0	0	200	100	0	0	0	20
CALFEX	1	27	0	0	0	15	200	200	4	0	0	20
Unit training												
Bn/Sqdn FTX	2	27								200	100	18
Co/Trp FTX	2	27								400	100	36
Plt FTX	4	24								400	100	18
Bn/Sqdn FCX	2	3										8
Co/Trp FCX	2	12										8
Totals												
Div Cav Sqdn			1944	756	756	1566	78300	33075	108	70800	20400	12174

Notes:

[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

[2] The three additional rounds required for Gunnery Table XII will be made up with 1st round hit savings from the crew tables. The three command tanks from company/troop and battalion/squadron do not fire platoon tables.

Table 2–16
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron (100) (TRC A)

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0	0
TCPC	2	41	0	0	0	0	0	0	0	0	0	17
V	2	41	0	0	0	0	700	250	0	0	0	10
Screening	2	41	2	2	2	0	0	0	0	0	0	0
VI	2	41	0	0	0	14	0	50	0	0	0	12
VII	2	41	12	6	6	0	150	50	0	0	0	32
VIII	2	41	16	6	6	0	250	50	0	0	0	34
XI	1	41	0	0	0	15	300	125	0	0	0	20
XII[2]	1	41	12	0	0	0	200	100	0	0	0	20
CALFEX	1	41	0	0	0	15	200	200	4	0	0	20
Unit training												
Bn/Sqdn FTX	2	41								200	100	18

Table 2–16
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron (100) (TRC A)—Continued

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	G978	A111	A598	L602
Co/Trp FTX	2	39								400	100	36
Plt FTX	4	36								400	100	18
Bn/Sqdn FCX	2	5										8
Co/Trp FCX	2	17										8
Totals												
Armd Cav Sqdn			2952	1148	1148	2378	118900	50225	164	105200	30400	18298

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–17
Annual Training Strategy for M1A1/M1A2 Tank Battalion (100) (TRC A)

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	G815	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0	0
TCPC	2	58	0	0	0	0	0	0	0	0	0	17
V	2	58	0	0	0	0	700	250	0	0	0	10
Screening	2	58	2	2	2	0	0	0	0	0	0	0
VI	2	58	0	0	0	14	0	50	0	0	0	12
VII	2	58	12	6	6	0	150	50	0	0	0	32
VIII	2	58	16	6	6	0	250	50	0	0	0	34
XI	1	58	0	0	0	15	300	125	0	0	0	20
XII[2]	1	58	12	0	0	0	200	100	0	0	0	20
CALFEX	1	56	0	0	0	15	200	200	4	0	0	20
Unit training												
Bn/Sqdn FTX	2	58								200	100	18
Co/Trp FTX	2	56								400	100	36
Plt FTX	4	48								400	100	18
Bn/Sqdn FCX	2	22										8
Co/Trp FCX	2	20										8
Totals												
Tank Bn			4176	1624	1624	3364	167800	70650	224	144800	42000	25868

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.
[2] The three additional rounds required for Gunnery Table XII will be made up with 1st round hit savings from the crew tables. The ten Company/Troop and Battalion/ Squadron Command Tanks per Battalion do not fire Platoon Tables

Table 2–18
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron (44) (TRC B)

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0
TCPC	2	27	0	0	0	0	0	0	0	0	17
V	1	27	0	0	0	0	700	250	0	0	10
Screening	1	27	2	2	2	0	0	0	0	0	0
VI	1	27	0	0	0	14	0	50	0	0	12
VII	1	27	12	6	6	0	150	50	0	0	32
VIII	1	27	16	6	6	0	250	50	0	0	34
Unit training											
Bn/Sqdn FTX	0	27	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	27	0	0	0	0	0	0	0	0	0
Plt FTX	1	24	0	0	0	0	0	0	400	100	0
Bn/Sqdn FCX	0	3	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	12	0	0	0	0	0	0	0	0	0
Totals											
Div Cav Sqdn			810	378	378	378	29700	10800	9600	2400	3294

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–19
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron (44) (TRC B)

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0
TCPC	2	41	0	0	0	0	0	0	0	0	17
V	1	41	0	0	0	0	700	250	0	0	10
Screening	1	41	2	2	2	0	0	0	0	0	0
VI	1	41	0	0	0	14	0	50	0	0	12
VII	1	41	12	6	6	0	150	50	0	0	32
VIII	1	41	16	6	6	0	250	50	0	0	34
Unit training											
Bn/Sqdn FTX	0	41	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	39	0	0	0	0	0	0	0	0	0
Plt FTX	1	36	0	0	0	0	0	0	400	100	0
Bn/Sqdn FCX	0	5	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	17	0	0	0	0	0	0	0	0	0
Totals											

Table 2–19
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron (44) (TRC B)—Continued

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
Armd Cav Sqdn			1230	574	574	574	45100	16400	14400	3600	5002

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–20
Annual Training Strategy for M1A1/M1A2 Tank Battalion (44) (TRC B)

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0
TCPC	2	58	0	0	0	0	0	0	0	0	17
V	1	58	0	0	0	0	700	250	0	0	10
Screening	1	58	2	2	2	0	0	0	0	0	0
VI	1	58	0	0	0	14	0	50	0	0	12
VII	1	58	12	6	6	0	150	50	0	0	32
VIII	1	58	16	6	6	0	250	50	0	0	34
Unit training											
Bn/Sqdn FTX	0	58	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	56	0	0	0	0	0	0	0	0	0
Plt FTX	1	48	0	0	0	0	0	0	400	100	0
Bn/Sqdn FCX	0	22	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	20	0	0	0	0	0	0	0	0	0
Totals											
Tank Bn			1740	812	812	812	63800	23200	19200	4800	7076

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–21
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron (44) (TRC C) Gunnery Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0
TCPC	2	27	0	0	0	0	0	0	0	0	17
V	1	27	0	0	0	0	700	250	0	0	10
Screening	1	27	2	2	2	0	0	0	0	0	0
VI	1	27	0	0	0	14	0	50	0	0	12

Table 2–21
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron (44) (TRC C) Gunnery Year—Continued

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
VII	1	27	12	6	6	0	150	50	0	0	32
VIII	1	27	16	6	6	0	250	50	0	0	34
Unit training											
Bn/Sqdn FTX	0	27	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	27	0	0	0	0	0	0	0	0	0
Plt FTX	0	24	0	0	0	0	0	0	0	0	0
Bn/Sqdn FCX	0	3	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	12	0	0	0	0	0	0	0	0	0
Totals											
Div Cav Sqdn			810	378	378	378	29700	10800	0	0	3294

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–22
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron (44) (TRC C) Gunnery Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0
TCPC	2	41	0	0	0	0	0	0	0	0	17
V	1	41	0	0	0	0	700	250	0	0	10
Screening	1	41	2	2	2	0	0	0	0	0	0
VI	1	41	0	0	0	14	0	50	0	0	12
VII	1	41	12	6	6	0	150	50	0	0	32
VIII	1	41	16	6	6	0	250	50	0	0	34
Unit training											
Bn/Sqdn FTX	0	41	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	39	0	0	0	0	0	0	0	0	0
Plt FTX	0	36	0	0	0	0	0	0	0	0	0
Bn/Sqdn FCX	0	5	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	17	0	0	0	0	0	0	0	0	0
Totals											
Armd Cav Sqdn			1230	574	574	574	45100	16400	0	0	5002

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–23
Annual Training Strategy for M1A1/M1A2 Tank Battalion (44) (TRC C) Gunnery Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	0	0	0	0	0	0	0	0	0
TCPC	2	58	0	0	0	0	0	0	0	0	17
V	1	58	0	0	0	0	700	250	0	0	10
Screening	1	58	2	2	2	0	0	0	0	0	0
VI	1	58	0	0	0	14	0	50	0	0	12
VII	1	58	12	6	6	0	150	50	0	0	32
VIII	1	58	16	6	6	0	250	50	0	0	34
Unit training											
Bn/Sqdn FTX	0	58	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	56	0	0	0	0	0	0	0	0	0
Plt FTX	0	48	0	0	0	0	0	0	0	0	0
Bn/Sqdn FCX	0	22	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	20	0	0	0	0	0	0	0	0	0
Totals											
Tank Bn			1740	812	812	812	63800	23200	0	0	7076

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–24
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron (22) (TRC C) Maneuver Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0	0
TCPC	1	27	0	0	0	0	0	0	0	0	17
V	1	27	0	0	0	0	700	250	0	0	10
Screening	1	27	2	2	2	0	0	0	0	0	0
VI	1	27	0	0	0	14	0	50	0	0	12
VII	1	27	12	6	6	0	150	50	0	0	32
VIII	0	27	0	0	0	0	0	0	0	0	0
Unit training											
Bn/Sqdn FTX	0	27	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	27	0	0	0	0	0	0	0	0	0
Plt FTX	1	24	0	0	0	0	0	0	400	100	0
Bn/Sqdn FCX	0	3	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	12	0	0	0	0	0	0	0	0	0

Table 2–24
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron (22) (TRC C) Maneuver Year—Continued

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
Totals											
Div Cav Sqdn			378	216	216	378	22950	9450	9600	2400	1917

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–25
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron (22) (TRC C) Maneuver Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0	0
TCPC	1	41	0	0	0	0	0	0	0	0	17
V	1	41	0	0	0	0	700	250	0	0	10
Screening	1	41	2	2	2	0	0	0	0	0	0
VI	1	41	0	0	0	14	0	50	0	0	12
VII	1	41	12	6	6	0	150	50	0	0	32
VIII	0	41	0	0	0	0	0	0	0	0	0
Unit training											
Bn/Sqdn FTX	0	41	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	39	0	0	0	0	0	0	0	0	0
Plt FTX	1	36	0	0	0	0	0	0	400	100	0
Bn/Sqdn FCX	0	5	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	17	0	0	0	0	0	0	0	0	0
Totals											
Armd Cav Sqdn			574	328	328	574	34850	14350	14400	3600	2911

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–26
Annual Training Strategy for M1A1/M1A2 Tank Battalion (22) (TRC C) Maneuver Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
COFT	6	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	1	0	0	0	0	0	0	0	0	0	0
TCPC	1	58	0	0	0	0	0	0	0	0	17
V	1	58	0	0	0	0	700	250	0	0	10
Screening	1	58	2	2	2	0	0	0	0	0	0

Table 2–26
Annual Training Strategy for M1A1/M1A2 Tank Battalion (22) (TRC C) Maneuver Year—Continued

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	Cal .50 Subcal Device	7.62-mm	Cal .50	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A585	A131	A557	A111	A598	L602
VI	1	58	0	0	0	14	0	50	0	0	12
VII	1	58	12	6	6	0	150	50	0	0	32
VIII	0	58	0	0	0	0	0	0	0	0	0
Unit training											
Bn/Sqdn FTX	0	58	0	0	0	0	0	0	0	0	0
Co/Trp FTX	0	56	0	0	0	0	0	0	0	0	0
Plt FTX	1	48	0	0	0	0	0	0	400	100	0
Bn/Sqdn FCX	0	22	0	0	0	0	0	0	0	0	0
Co/Trp FCX	0	20	0	0	0	0	0	0	0	0	0
Totals											
Tank Bn			812	464	464	812	49300	20300	19200	4800	4118

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–27
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron w/TWGSS (90) (TRC A)

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	5.56 mm Blank	Hoffman
DODIC			C785	C784		A131	A557	G815	A111	A598	A080	L602
COFT	24	0	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0	0
TCPC	2	27	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0	17
V	2	27	0	0	0	700	250	0	0	0	0	10
Screening	2	27	2	2	2	0	0	0	0	0	0	0
VI	2	27	TWGSS	TWGSS	TWGSS	0	50	0	0	0	0	12
VII	2	27	8	5	5	150	50	0	0	0	0	32
VIII	2	27	16	6	6	250	50	0	0	0	0	34
XI	1	27	TWGSS	TWGSS	TWGSS	300	125	0	0	0	0	20
XII[2]	1	27	12	0	0	200	100	0	0	0	0	20
CALFEX	1	27	TWGSS	TWGSS	TWGSS	200	200	4	0	0	0	20
Unit training												
Bn/Sqdn FTX	2	27	TWGSS	TWGSS	TWGSS				200	100		18
Co/Trp FTX	2	27	TWGSS	TWGSS	TWGSS				400	100		36
Plt FTX	4	24	TWGSS	TWGSS	TWGSS				400	100		18
Bn/Sqdn FCX	2	3	TWGSS	TWGSS	TWGSS							8
Co/Trp FCX	2	12	TWGSS	TWGSS	TWGSS							8
Totals												
Div Cav Sqdn			1728	702	702	78300	33075	108	70800	20400	0	12174

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.
[2] The three additional rounds required for Gunnery Table XII will be made up with 1st round hit savings from the crew tables. The three Company/Troop and Battalion/Squadron command Tanks do not fire Platoon Tables.

Table 2–28
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron w/TWGSS (90) (TRC A)

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	41	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	2	41	0	0	0	700	250	0	0	0	10
Screening	2	41	2	2	2	0	0	0	0	0	0
VI	2	41	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	2	41	8	5	5	150	50	0	0	0	32
VIII	2	41	16	6	6	250	50	0	0	0	34
XI	1	41	TWGSS	TWGSS	TWGSS	300	125	0	0	0	20
XII[2]	1	41	12	0	0	200	100	0	0	0	20
CALFEX	1	41	TWGSS	TWGSS	TWGSS	200	200	4	0	0	20
Unit training											
Bn/Sqdn FTX	2	41	TWGSS	TWGSS	TWGSS				200	100	18
Co/Trp FTX	2	39	TWGSS	TWGSS	TWGSS				400	100	36
Plt FTX	4	36	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	2	5	TWGSS	TWGSS	TWGSS						8
Co/Trp FCX	2	17	TWGSS	TWGSS	TWGSS						8
Totals											
Armd Cav Sqdn			2624	1066	1066	118900	50225	164	105200	30400	18298

Notes:

[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

[2] The three additional rounds required for Gunnery Table XII will be made up with 1st round hit savings from the crew tables. The five Company/Troop and Battalion/Squadron command Tanks do not fire Platoon Tables

Table 2–29
Annual Training Strategy for M1A1/M1A2 Tank Battalion w/TWGSS (90) (TRC A)

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	58	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	2	58	0	0	0	700	250	0	0	0	10
Screening	2	58	2	2	2	0	0	0	0	0	0
VI	2	58	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	2	58	8	5	5	150	50	0	0	0	32
VIII	2	58	16	6	6	250	50	0	0	0	34
XI	1	58	TWGSS	TWGSS	TWGSS	300	125	0	0	0	20
XII[2]	1	58	12	0	0	200	100	0	0	0	20
CALFEX	1	56	TWGSS	TWGSS	TWGSS	200	200	4	0	0	20

Table 2–29
Annual Training Strategy for M1A1/M1A2 Tank Battalion w/TWGSS (90) (TRC A)—Continued

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
Unit training											
Bn/Sqdn FTX	2	58	TWGSS	TWGSS	TWGSS				200	100	18
Co/Trp FTX	2	56	TWGSS	TWGSS	TWGSS				400	100	36
Plt FTX	4	48	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	2	22	TWGSS	TWGSS	TWGSS						8
Co/Trp FCX	2	20	TWGSS	TWGSS	TWGSS						8
Totals											
Tank Bn			3712	1508	1508	167800	70650	224	144800	42000	25868

Notes:

[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

[2] The three additional rounds required for Gunnery Table XII will be made up with 1st round hit savings from the crew tables. The ten Company/Troop and Battalion/Squadron command Tanks do not fire Platoon Tables

Table 2–30
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron w/TWGSS (39) (TRC B)

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G815	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	27	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	27	0	0	0	700	250	0	0	0	10
Screening	1	27	2	2	2	0	0	0	0	0	0
VI	1	27	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	27	8	5	5	150	50	0	0	0	32
VIII	1	27	16	6	6	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	27							0	0	0
Co/Trp FTX	0	27							0	0	0
Plt FTX	1	24	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	3									0
Co/Trp FCX	0	12									0
Totals											
Div Cav Sqdn			702	351	351	29700	10800	0	9600	2400	3726

Notes:

[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–31
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron w/TWGSS (39) (TRC B)

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	41	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	41	0	0	0	700	250	0	0	0	10
Screening	1	41	2	2	2	0	0	0	0	0	0
VI	1	41	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	41	8	5	5	150	50	0	0	0	32
VIII	1	41	16	6	6	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	41							0	0	0
Co/Trp FTX	0	39							0	0	0
Plt FTX	1	36	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	5									0
Co/Trp FCX	0	17									0
Totals											
Armd Cav Sqdn			1066	533	533	45100	16400	0	14400	3600	5650

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–32
Annual Training Strategy for M1A1/M1A2 Tank Battalion w/TWGSS (39) (TRC B)

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	58	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	58	0	0	0	700	250	0	0	0	10
Screening	1	58	2	2	2	0	0	0	0	0	0
VI	1	58	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	58	8	5	5	150	50	0	0	0	32
VIII	1	58	16	6	6	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	58							0	0	0
Co/Trp FTX	0	56							0	0	0
Plt FTX	1	48	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	22									0
Co/Trp FCX	0	20									0
Totals											

Table 2–32
Annual Training Strategy for M1A1/M1A2 Tank Battalion w/TWGSS (39) (TRC B)—Continued

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
Tank Bn			1508	754	754	63800	23200	0	19200	4800	7940

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–33
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron w/TWGSS (39) (TRC C) Gunnery Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	27	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	27	0	0	0	700	250	0	0	0	10
Screening	1	27	2	2	2	0	0	0	0	0	0
VI	1	27	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	27	8	5	5	150	50	0	0	0	32
VIII	1	27	16	6	6	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	27							0	0	0
Co/Trp FTX	0	27							0	0	0
Plt FTX	1	24	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	3									0
Co/Trp FCX	0	12									0
Totals											
Div Cav Sqdn			702	351	351	29700	10800	0	9600	2400	3726

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–34
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron w/TWGSS (39) (TRC C) Gunnery Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	41	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	41	0	0	0	700	250	0	0	0	10
Screening	1	41	2	2	2	0	0	0	0	0	0
VI	1	41	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	41	8	5	5	150	50	0	0	0	32

Table 2–34
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron w/TWGSS (39) (TRC C) Gunnery Year—Continued

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
VIII	1	41	16	6	6	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	41							0	0	0
Co/Trp FTX	0	39							0	0	0
Plt FTX	1	36	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	5									0
Co/Trp FCX	0	17									0
Totals											
Armd Cav Sqdn			1066	533	533	45100	16400	0	14400	3600	5650

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–35
Annual Training Strategy for M1A1/M1A2 Tank Battalion w/TWGSS (39) (TRC C) Gunnery Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G815	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	58	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	58	0	0	0	700	250	0	0	0	10
Screening	1	58	2	2	2	0	0	0	0	0	0
VI	1	58	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	58	8	5	5	150	50	0	0	0	32
VIII	1	58	16	6	6	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	58							0	0	0
Co/Trp FTX	0	56							0	0	0
Plt FTX	1	48	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	22									0
Co/Trp FCX	0	20									0
Totals											
Tank Bn			1508	754	754	63800	23200	0	19200	4800	7940

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–36
Annual Training Strategy for M1A1/M1A2 Divisional Cavalry Squadron w/TWGSS (17) (TRC C) Maneuver Year

Event/Table	Freq	Div Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	27	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	27	0	0	0	700	250	0	0	0	10
Screening	1	27	2	2	2	0	0	0	0	0	0
VI	1	27	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	27	8	5	5	150	50	0	0	0	32
VIII	1	27	TWGSS	TWGSS	TWGSS	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	27							0	0	0
Co/Trp FTX	0	27							0	0	0
Plt FTX	1	24	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	3									0
Co/Trp FCX	0	12									0
Totals											
Div Cav Sqdn			270	189	189	29700	10800	0	9600	2400	3726

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–37
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron w/TWGSS (17) (TRC C) Maneuver Year

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	41	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	41	0	0	0	700	250	0	0	0	10
Screening	1	41	2	2	2	0	0	0	0	0	0
VI	1	41	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	41	8	5	5	150	50	0	0	0	32
VIII	1	41	TWGSS	TWGSS	TWGSS	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	41							0	0	0
Co/Trp FTX	0	39							0	0	0
Plt FTX	1	36	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	5									0
Co/Trp FCX	0	17									0
Totals											

Table 2–37
Annual Training Strategy for M1A1/M1A2 Armored Cavalry Squadron w/TWGSS (17) (TRC C) Maneuver Year—Continued

Event/Table	Freq	Armd Cav Sqdn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
Armd Cav Sqdn			410	287	287	45100	16400	0	14400	3600	5650

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Table 2–38
Annual Training Strategy for M1A1/M1A2 Tank Battalion w/TWGSS (17) (TRC C) Maneuver Year

Event/Table	Freq	Tank Bn	TPCSDS-T	HEAT-TP-T	MPAT-TP-T[1]	7.62-mm	Cal .50	Red Phos	7.62-mm Blank	Cal .50 Blank	Hoffman
DODIC			C785	C784		A131	A557	G978	A111	A598	L602
COFT	24	0	0	0	0	0	0	0	0	0	0
Abrams FIST I	12	0	0	0	0	0	0	0	0	0	0
TCGST	2	0	TWGSS	TWGSS	TWGSS	0	0	0	0	0	0
TCPC	2	58	TWGSS	TWGSS	TWGSS	0	0	0	0	0	17
V	1	58	0	0	0	700	250	0	0	0	10
Screening	1	58	2	2	2	0	0	0	0	0	0
VI	1	58	TWGSS	TWGSS	TWGSS	0	50	0	0	0	12
VII	1	58	8	5	5	150	50	0	0	0	32
VIII	1	58	TWGSS	TWGSS	TWGSS	250	50	0	0	0	34
Unit training											
Bn/Sqdn FTX	0	58							0	0	0
Co/Trp FTX	0	56							0	0	0
Plt FTX	1	48	TWGSS	TWGSS	TWGSS				400	100	18
Bn/Sqdn FCX	0	22									0
Co/Trp FCX	0	20									0
Totals											
Tank Bn			580	406	406	63800	23200	0	19200	4800	7940

Notes:
[1] Units will receive either MPAT-TP-T or HEAT-TP-T.

Chapter 3
Field Artillery Weapon Systems

Section I
Introduction

3–1. Standards, strategies, and requirements

a. This chapter provides weapon standards, training strategies and resource requirements for units equipped with the 105-mm Howitzer, 155-mm Howitzer, and the MLRS. The training programs provided have been specifically designed for each weapon system at four different TRCs. Also included are resource requirements for the AFSC/OH-58D at TRC A. Each program contains a standard and strategy that outlines the training sequence and includes suggested frequencies of live fire, subcaliber fire, and use of devices. Table 3-1 is an index of weapons and weapon systems for which training programs have been written and approved. This table provides cross reference entries to the standard and strategy for each specific weapon or weapon system.

b. The objective is to assist field commanders in attaining and sustaining their TRC standards and to develop acceptable levels of weapon proficiency in all units.

c. The training strategies in this chapter are based on exercises in current FMs, TCs, Artillery tables, the fire support CATS and Army MTPs. The specifics of each exercise will not be presented here; the appropriate manual must be consulted.

3–2. Training devices

a. General. Historically, the Field Artillery has relied on extensive use of actual equipment and full caliber ammunition to train individuals, crews, batteries, and battalions. However, the escalating cost of ammunition, coupled with the fact that many critical tasks may be better trained using devices and simulators, has shifted the emphasis to a combination of full caliber and subcaliber ammunition, with devices and simulators integrated throughout the training programs.

b. Objective. Training devices aid sustainment training in garrison or local training areas. Devices enhance and sustain skills and may be the sole medium for training certain critical tasks.

c. Device list. The following devices are an integral part of the

training strategies. Full caliber ammunition requirements are based on using training devices, as presented in the strategies.

(1) *Artillery direct fire trainer.* The ADFT trains gunnery procedures used in direct fire for 105-mm and 155-mm Howitzer units. The ADFT should be used prior to expenditure of full caliber ammunition. It should be used at least three times per year. It is available through the training support center (TSC).

(2) *M823 copperhead training projectile.* This is a TOE item fielded (three per 155-mm Howitzer battalion) with the G/VLLD copperhead system. Howitzer crews use the M823 to train cannoneers to prepare, load and extract the Copperhead round. Using the M823 three times per year during dry-fire training negates any requirement to handle, or fire, an actual Copperhead round in procedural training.

(3) *M31 subcaliber trainer.* The M31 trainer is issued one per battalion. Each trainer comes with two tripods and enough inbore adapters and barrels to outfit one battery. Firing tables and user manuals are provided as part of the M31 set. There is no M31 TACFIRE program; however, the battery computer system (BCS) does have an M31 program. When used as an artillery cannon procedural trainer, this device sustains observer, fire direction center, and howitzer crew individual and collective tasks.

(4) *Training set fire observation.* The TFSO trains the FIST and forward observer in the delivery-of-fire portions of the ARTEP tasks. It is designed to sustain observer proficiency between live-fire exercises. Two TSFOs are fielded to each AC Division Artillery (DIVARTY) and FA brigade. Additional TSFOs are fielded to major RC training locations. Army Reserve and National Guard units use the forward observer trainer (FOT) when a TSFO is not available.

(5) *Ground/vehicular laser locator designator—evaluator (G/VLLD-E).* The G/VLLD-E is used with the G/VLLD tracking board to evaluate G/VLLD operator tracking skills. Units may train with the actual G/VLLD (with the shorting plug or safety filter installed) but must use the G/VLLD-E to evaluate operator tracking proficiency. One G/VLLD-E is fielded to each AC DIVARTY or FA brigade and should be used to evaluate G/VLLD operators every six months.

(6) *TSC inert training projectile/fuze.* TSC builds and issues inert training projectiles and fuzes which replicate actual howitzer projectiles and fuzes. These training projectiles allow crew members to practice fuzing operations and projectile marking recognition. These training projectiles should be used quarterly and are particularly useful prior to live-fire exercises (AT, CALFEX, EXEVAL).

(7) *MLRS launch pod/container (LP/C) trainer.* LP/C trainers are issued two per launcher. The LP/C trainer is an actual LP/C, but contains no actual rockets. The LP/C trainer gives indications of the operational condition of simulated rockets. An instructor or evaluator can simulate faults that provide training for loading, offloading, misfire and hang fire.

(8) *The MLRS mass simulator.* The TSC can produce a device that simulates the weight and handling characteristics of an actual LP/C. This device is used by ammunition personnel to perform all HEMAT loading, unloading and tie-down operations required to transport the LP/C. The mass simulator cannot be loaded into the launcher.

(9) *Primers (155-mm) and shotgun shells (105-mm).* Primers and shotgun shells replicate complete rounds during field training exercises and have proven to be a viable training technique. The primers and shotgun shells are used in all aspects of the ammunition issue, resupply, accountability and expenditure system. The employment of this technique allows unit leaders to verify the various aspects of the ammunition management and supply system without the use of service ammunition.

(10) *Projectile, 155-mm: practice, M804 and M804A1.* The 155-mm, M804/M804A1 projectile may be used in place of the M107, HE projectile for training in indirect fire of 155-mm howitzers. The M804/M804A1 projectile contains a smoke canister in the fuze well, that provides for visual determination of functioning. It may be used in training at less cost than an M107 projectile, without the blast and fragmentation that accompany functioning of an M107. (See TM 43-0001-28, page 3-159)

Section II
Training Programs

3–3. Development

Training programs have been developed for each TRC level. STRAC proficiency standards are in paragraph 3-5. Training strategies apply to training platoons, batteries and battalions. Proficiency is achieved through the use of dry-fire exercises, subcaliber exercises, devices and full caliber live-fire exercises. Ammunition requirements are included in each training strategy.

3–4. Purpose and objectives of the training strategies

Training strategies provide a method to attain and sustain weapon proficiency throughout the training year.

3–5. Proficiency standards

a. Cannon.

(1) *TRC A.* Each platoon, battery and battalion must live-fire 80 percent of their METL related fire missions to ARTEP MTP standards twice annually.

(2) *TRC B.* Each platoon, battery and battalion must live fire 80 percent of their METL related fire missions to ARTEP MTP standards annually.

(3) *TRC C.* Each platoon, battery and battalion must live fire 80 percent of their METL related fire missions to ARTEP MTP standards annually.

(4) *TRC D.* USAR training battalions will train those events as outlined in tables 3-26 and 3-27. Committees will be resourced with one HE round per student.

b. Multiple launch rocket system.

(1) *TRC A.* Each battery and battalion must live fire 80 percent of their METL related fire missions to ARTEP MTP standards annually.

(2) *TRC C.* Each battery must live fire 80 percent of their METL related fire missions to ARTEP MTP standards once every 24 months. Each battalion must live-fire 80 percent of their METL related fire missions to ARTEP MTP standards once every 48 months.

3–6. Rocket assisted projectile

RAP rounds are available in limited quantities to establish soldier confidence in the weapon system. Commanders are authorized to requisition two RAP rounds per tube annually for 155-mm howitzers. Unit commanders must take a hard look at the training value gained since four HE rounds must be traded for each RAP round required. Ammunition requirements for RAP firing are given in applicable tables for 155-mm howitzer weapon systems.

3–7. Close support/special munitions

a. Close-support tasks are included in 105-mm Howitzer battalion table 3-3. These tasks satisfy the mission to provide close-in fires in support of light infantry units.

b. Special munitions tasks (smoke, WP, Illumination) have been given a separate Table VIII entry in the cannon descriptive training strategy tables. This entry reflects the different frequency in which these special munitions missions are resourced.

Table 3–1
Field Artillery Weapon System Training Index Branch Specific Weapon Systems

Weapon	Paragraph	Table
105 HOW	3-5	3-2, 3-3, 3-4, 3-5
155 HOW	3-5	3-2, 3-6, 3-7, 3-8, 3-9, 3-10, 3-11,3-12, 3-13
155 HOW (Cav)	3-5	3-2, 3-14, 3-15 3-16
155 HOW Sep Btry (LID)	3-5	3-2, 3-17, 3-18
MLRS	3-5	3-19, 3-20, 3-21, 3-22, 3-23, 3-24
OH-58D	3-5	3-25
TRC D	3-5	3-26, 3-27
Other Weapons Systems		
AT-4	5-6	5-23
Rifle (M16A1/A2)	5-9	5-39
Grenade Launcher (M203)	5-9	5-44
Machine Gun (M60/M240B)	5-8	5-30
Machine Gun (M2 HB)	5-8	5-33
Submachine Gun (M3A1)	5-9	5-42
Pistols	5-9	5-45
Hand Grenades (M228/M67)	5-9	5-48
Claymore Mine (M18A1)	5-9	5-50
Pyrotechnics	8-1	8-9 thru 8-12

Table 3–2
Annual Crew/Section/Team Training (105/155-mm)

Event	Freq	Who
TRC A		
Tactical Techniques	12	HOW crew
ADFT	3	HOW crew
Copperhead (M823)	3	HOW crew
M31	1	HOW crew
TSFO	4	FIST Team
M31	1	FIST Team
G/VLLD-E	2	FIST Team
C/DF	12	FDC Section
M31	1	FDC Section
TRC C		
Tactical Techniques	12	HOW crew
ADFT	3	HOW crew
M31	1	HOW crew
TSFO	6	FIST Team
M31	1	FIST Team
M31	1	FDC Section
C/DF	12	FDC Section

Table 3–3
105mm How Battalion Annual Requirements to Train Fire Tasks (Fire Missions) identified in MTP

		3x6 TRC A & B/C	
Fire Mission	CS[1]	Btry	Bn
Echelons Above Bn Mass			X
FFE (Bn Mass)			X
Engage a Moving Target Array		X	X
Low Angle Adjust	X	X	X
Precision Reg		X	X
High Burst/MPI		X	X
High Angle Adjust (Radar or FO)		X	X
Coordinated Illum	X		X
FPF Adjust	X	X	

Table 3–3
105mm How Battalion Annual Requirements to Train Fire Tasks (Fire Missions) identified in MTP—Continued

		3x6 TRC A & B/C	
Fire Mission	CS[1]	Btry	Bn
Simultaneous Mission	X	X	
Emergency Mission		X	
Quick Smoke		X	
Irregularly Shaped Target			X
TOT	X	X	X
Schedule of Fires	X	X	X
Immediate Suppression	X	X	
Priority Target	X	X	
Illumination		X	
Direct Fire		X	
MET + VE		X	X
MET to Target (outside transfer limits)			X
Smoke	X	X	
Immediate Smoke	X	X	
FFE Mass		X	
Sweep and Zone	X	X	
Assault Fire	X	X	
FFE Chemical		X	X
FFE ICM		X	X

Notes:
[1] Close Support

Table 3–4
Ammunition Requirements per 105-mm How Battalion (3x6: TRC A) Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	.10 Gage Shot Gun[1]	HE	Smoke	WP	Ext Rng	Illum
DODIC			A010	C445	C452	C454	C473	C449
VII	6		48				[6]	
VIII	6	AT II & VII		86				
VIII Special[5]	4	AT II & VII		8	6	6		12
X	5		144					
XI	5	AT II & X		223	0	6	[6]	18
Btry EXEVAL	1			94	6	6		12
Btry CALFEX	7			71	6	0		18
Bn EXEVAL	1			223	0	6		18
Bn CALFEX	1			223	0	6		18
TOTALS:								
Total per Battery[2] (AT VII, VIII, CALFEX, and EXEVAL)			288	1157	72	30	6	186
Total Battery (3 Btrys)			864	3471	216	90	18	558
Total Battalion Training			720	1561	0	42	18	126

Table 3–4
Ammunition Requirements per 105-mm How Battalion (3x6: TRC A) Artillery Table Descriptive Training Strategy—Continued

Artillery Table/Event	Freq	Critical Gates	.10 Gage Shot Gun[1]	HE	Smoke	WP	Ext Rng	Illum
DODIC			A010	C445	C452	C454	C473	C449
Battlaion Total [3,4,6]			1584	5032	216	132	36	684

Notes:

[1] Shot gun shells for use in training during nonfiring exercises: AT VIIs receive 60; AT Xs receive 120.

[2] Includes 18 rounds for annual direct fire exercise.

[3] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[4] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[5] Special munitions training strategy (smoke, WP, illum) .

[6] Each tube receives annually one extended range round (C473) each in Tables VII and XI.

Table 3–5
Ammunition Requirements per 105-mm How Battalion (3x6: TRC B/C Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	.10 Gage Shot Gun[1]	HE	Smoke	WP	Illum
DODIC			A010	C445	C452	C454	C449
VII	4		48				
VIII	4	AT II & VII		59			
VIII Special[4]	3	AT II & VII		14	6	6	12
X	5		210				
XI	1	AT II & X		166	0	6	18
Btry EXEVAL	1			73	6	6	12
Btry CALFEX	5			45	0	0	18
Bn EXEVAL	1			166	0	6	18
TOTALS:							
Total per Battery (AT VII, VIII, CALFEX, and EXEVAL)			192	576	24	24	138
Total Battery Tn (3 Btrys)			576	1728	72	72	414
Total Battalion Tng			1050	332	0	12	36
Battalion Total [2,3]			1626	2060	72	84	450

Notes:

[1] Shot gun shells for use in training during nonfiring exercises: AT VIIs receive 60; AT Xs receive 120.

[2] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[3] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[4] Special munitions training strategy (smoke, WP, illum) .

Table 3–6
155-mm How Battalion Annual Requirements to Train Fire Tasks (Fire Missions) identified in MTP

	3x8 TRC		3x6 TRC	Cav Btry		Sep Btry (1X8)					
	A & B/C			A & B/C		A & B/C			(LID) A & B/C		
Fire Mission	Plt	Btry	Bn	Btry	Bn	Plt	Btry	Bn	Plt	Btry	Bn
Echelons Above Bn Mass			X		X			X			X
FFE (Bn Mass)			X		X			X			X
Engage a Moving Target Array			X	X	X	X	X		X	X	
Low Angle Adjust	X	X	X	X	X	X	X		X	X	X
Precision Reg	X	X	X	X	X	X	X	X			
High Burst/MPI	X	X	X	X	X	X	X	X			
High Angle Adjust (Radar or FO)	X	X	X	X	X	X	X	X	X	X	
Coordinated Illum			X		X			X			X
FPF Adjust	X	X		X	X	X	X		X	X	
Simultaneous Mission			X		X			X			X
Emergency Mission	X	X		X		X	X		X	X	
Quick Smoke		X		X			X			X	
Irregularly Shaped Target			X		X			X			X
TOT	X	X	X	X	X	X	X	X	X	X	X
Schedule of Fires	X	X	X	X	X	X	X	X	X	X	X
Immediate Suppression	X	X		X	X	X	X		X	X	
Priority Target	X	X		X	X	X	X		X	X	
Illumination		X		X			X			X	
Direct Fire		X		X			X			X	
MET + VE	X	X	X	X	X	X	X	X	X	X	X
MET to Target (outside transfer limits)					X			X			X
Smoke	X	X		X		X	X		X	X	
Immediate Smoke	X	X		X		X	X		X	X	
FFE RAP[1]	X	X		X		X	X		X	X	
FFE Mass	X	X		X		X	X		X	X	
Sweep and Zone	X	X		X		X	X		X	X	
Assault Fire	X	X		X		X	X		X	X	
FFE Copperhead	X	X		X		X	X		X	X	
FFE Chemical	X	X	X	X	X	X	X	X	X	X	
FFE ICM	X	X	X	X	X	X	X	X	X	X	X
FFE FASCAM	X	X	X	X	X	X	X	X	X	X	X

Notes:
[1] RAP authorization is based on a four HE to one RAP tradeoff. Unit commanders will determine which HE missions will be sacrificed if RAP is fired. Annual RAP ammunition forecasts must include forecasts for the appropriate charges.

Table 3–7
Ammunition Requirements per 155-mm Direct Support HOW Battalion (3x8: TRC A) Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV[2]	2		100					
V[2]	2	AT II & IV		57	0	0	0	
VII	3		100					

Table 3–7
Ammunition Requirements per 155-mm Direct Support HOW Battalion (3x8: TRC A) Artillery Table Descriptive Training Strategy—Continued

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
VIII	3	II &VII		89				
VIII Special Munitions[7]	2	II &VII		10	8	6	12	16
X	5		350					
XI	5	AT II & X		227	0	6	18	
Btry EXEVAL	1			99	8	6	12	
Btry CALFEX	1			99	8	6	12	
Bn EXEVAL	1			227	0	6	18	
Bn CALFEX	1			227	0	6	18	
Totals:								
Total per Platoon (AT IV &V)			200	114	0	0	0	0
Total Platoon Tng (6 Platoons)			1200	684	0	0	0	0
Total per Battery[3] (AT VII & VIII, CALFEX and EXEVAL)			300	509	32	24	48	16
Total Battery Tng (3 Btrys)			900	1527	96	72	144	48
Total Battalion Tng			1750	1589	0	42	126	0
Battalion Total[4,5,6]			3850	3800	96	114	270	48

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 100; AT VIIs—100; AT Xs—350.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] Includes 24 HE rounds for an annual direct fire exercise.

[4] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[5] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[6] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[7] Special munitions training strategy (smoke, WP, illum) .

Table 3–8
Ammunition Requirements per 155-mm General Support How Battalion (3x8: TRC A Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV	2		100					
V	2	AT II & IV		57	0	0	0	
VII	3		100					
VIII	3	II &VII		89				
VIII Special Munitions[7]	2	II &VII		10	8	6	12	16
X	5		350					
XI	5	AT II & X		227	0	6	18	
Btry EXEVAL	1			99	8	6	12	
Btry CALFEX	1			99	8	6	12	
Bn EXEVAL	1			227	0	6	18	
TOTALS:								

Table 3–8
Ammunition Requirements per 155-mm General Support How Battalion (3x8: TRC A Artillery Table Descriptive Training Strategy—Continued

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
Total per Platoon (AT IV &V)			200	114	0	0	0	0
Total Platoon Tng (6 Platoons)			1200	684	0	0	0	0
Total per Battery[3] (AT VII & VIII								
CALFEX and EXEVAL)			300	509	32	24	48	16
Total Battery Tng ((3 Btrys)			900	1527	96	72	144	48
Total Battalion Tng			1750	1362	0	36	108	0
Battalion Total [4,5,6]			3850	3573	96	108	252	48

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 100; AT VIIs—100; AT Xs—350.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] Includes 24 rounds for an annual direct fire exercise.

[4] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[5] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[6] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[7] Special munitions training strategy (smoke, WP, illum).

Table 3–9
Ammunition Requirements per 155-mm Direct Support How Battalion (3x8: TRC B/C) Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV[2]	2		100					
V[2]	1	AT II & IV		29	0	0	0	
VII	3		100					
VIII	2	II &VII		65				
VIII Special Munitions[6]	1	II &VII		10	8	6	12	16
X	5		350					
XI	1	AT II & X		125	0	6	0	
Btry EXEVAL	1			75	8	6	12	
Btry CALFEX	1			75	8	6	12	
Bn EXEVAL	1			125	0	6	0	
Totals:								
Total per Platoon (AT IV & V)			200	29	0	0	0	0
Total Platoon Tng (6 Platoons)			1200	174	0	0	0	0
Total per Battery								
(AT VII, VIII, CALFEX, and EXEVAL)			300	290	24	18	36	16
Total Battery Tng (3 Btrys)			900	870	72	54	108	48
Total Battalion Tng			1750	250	0	12	0	0

Table 3–9
Ammunition Requirements per 155-mm Direct Support How Battalion (3x8: TRC B/C) Artillery Table Descriptive Training Strategy—Continued

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
Battalion Total[3,4,5]			3850	1294	72	66	108	48

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 100; AT VIIs—100; AT Xs—350.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[4] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[5] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[6] Special munitions training strategy (smoke, WP, illum) .

Table 3–10
Requirements per 155-mm General Support How Battalion (3x8: TRC B/C) Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV[2]	2		100					
V[2]	1	AT II & IV		29	0	0	0	
VII	3		100					
VIII	2	II &VII		65				
VIII Special Munitions[6]	1	II &VII		10	8	6	12	16
X	5		350					
XI	1	AT II & X		125	0	6	0	
Btry EXEVAL	1			75	8	6	12	
Btry CALFEX	1			75	8	6	12	
Btry EXEVAL	1			125	0	6	0	
TOTALS:								
Total per Platoon (AT IV & V)			200	29	0	0	0	0
Total Platoon Tng (6 Platoons)			1200	174	0	0	0	0
Total per Battery								
(AT VII, VIII, CALFEX, and EXEVAL)			300	290	24	18	36	16
Total Battery Tng (3 Btrys)			900	870	72	54	108	48
Total Battalion Tng			1750	250	0	12	0	0
Battalion Total[3,4,5]			3850	1294	72	66	108	48

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 100; AT VIIs—100; AT Xs—350.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[4] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[5] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[6] Special munitions training strategy (smoke, WP, illum).

Table 3–11
Ammunition Requirements per 155-mm Direct Support How Battalion (3x6: TRC A) Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	Primes[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
VII	5		150					
VIII	5	II & VII		69				
VIII Special Munitions[6]	4	II & VII		8	6	6	12	12
X	5		350					
XI	5	AT II & X		173	0	6	18	
Btry EXEVAL	1			77	6	6	12	
Btry CALFEX	1			77	6	6	12	
Bn EXEVAL	1			173	0	6	18	
Bn CALFEX	1			173		6	18	
Totals:								
Total per Battery [2]								
(AT VII, VIII, CALFEX, and EXEVAL)			750	549	36	36	72	12
Total Battery Tng			2250	1647	108	108	216	36
Total Battalion Tng			1750	1211	0	36	126	0
Battalion Total[3,4]			4000	2858	108	144	342	36

Notes:

[1] Primers are for use in training during nonfiring exercises: AT VIIs—150; AT Xs—350.

[2] Includes 18 rounds for annual direct fire exercise.

[3] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[4] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[5] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[6] Special munitions training strategy (smoke, WP, illum).

Table 3–12
Ammunition Requirements per 155-mm General Support How Battalion (3x6: TRC A)Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
VII	5		150					
VIII	5	II & VII		69				
VIII Special Munitions[6]	4	II & VII		8	6	6	12	12
X	5		350					
XI	5	AT II & X		173	0	6	18	
Btry EXEVAL	1			77	6	6	12	
Btry CALFEX	1			77	6	6	12	
Bn EXEVAL	1			173	0	6	18	
Totals:								
Total per Battery[2] (AT VII, VIII, CALFEX, and EXEVAL)			750	549	36	36	72	12
Total Battery Tng (3 Btrys)			2250	1647	108	108	216	36

Table 3–12
Ammunition Requirements per 155-mm General Support How Battalion (3x6: TRC A)Artillery Table Descriptive Training Strategy—Continued

Artillery Table/Event	Freq	Critical Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
Total Battalion Tng			1750	1038	0	36	108	0
Battalion Total[3,4, 5]			4000	2685	108	144	324	36

Notes:

[1] Primers are for use in training during nonfiring exercises: AT VIIs—150; AT Xs—350.

[2] Includes 18 rounds for annual direct fire exercise.

[3] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[4] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[5] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[6] Special munitions training strategy (smoke, WP, illum) .

Table 3–13
Ammunition Requirements per 155-mm Direct Support/General Support How Battalion (3x6: TRC B/C) Artillery Table Descriptive Training Strategy

Artillery Table/Event	Freq	Critical Gates	Primers1	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
VII	5		150					
VIII	3	II &VII		57				
VIII Special Munitions[5]	2	II &VII		8	6	6	12	12
X	5		350					
XI	1	AT II & X		81	0	6	0	
Btry EXEVAL	1			65	6	6	12	
Btry CALFEX	1			65	6	6	12	
Bn EXEVAL	1			81	0	6	0	
Totals:								
Total per Battery								
(AT VII, VIII, CALFEX, and EXEVAL)			750	317	24	24	48	12
Total Battery Tng (3 Btrys)			2250	951	72	72	144	36
Total Battalion Tng			1750	162	0	12	0	0
Battalion Total[2,3,4]			4000	1113	72	84	144	36

Notes:

[1] Primers are for use in training during nonfiring exercises: AT VIIs—150; AT Xs—350.

[2] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[3] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[4] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[5] Special munitions training strategy (smoke, WP, illum) .

Table 3–14
Ammunition Requirements per 155 Cavalry/Separate How Battery (1x8: TRC A) Artillery Table Descriptive Training Strategy

Artillery		Critical						
Table/Event	Freq	Gates	Primers	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV[2]	3		250					
V[2]	2	AT II & IV		45	0	0	0	
VII	3		250					
VIII	3	II & VII		85				
VIII Special Munitions[7]	2	II & VII		10	8	6	0	16
X	5		350					
XI	5	AT II & X		86	0	6	16	
Btry EXEVAL	1			95	8	6	0	
Btry CALFEX	1			95	8	6	0	
Bn EXEVAL	1			86	0	6	16	
Bn CALFEX	1			86	0	6	16	
Totals:								
Total per Platoon (AT IV & V)			750	90	0	0	0	0
Total Platoon Tng (2 Platoons)			1500	180	0	0	0	0
Total per Battery[3]								
(AT VII, VIII, CALFEX, and EXEVAL)			750	489	32	24	0	16
Total Battalion Tng			1750	602	0	42	112	0
Battalion Total[4,5,6]			4000	1271	32	66	112	16

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 250; AT VIIs—250; AT Xs—350.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] Includes 24 rounds for an annual direct fire exercise.

[4] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[5] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[6] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[7] Special munitions training strategy (smoke, WP, illum) .

Table 3–15
Ammunition Requirements per 155 How Battery (1x8: TRC C) Artillery Table Descriptive Training Strategy

Artillery		Critical						
Table/Event	Freq	Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV[2]	2		250					
V[2]	1	AT II & IV		45	0	0	0	
VII	3		250					
VIII	2	II & VII		65				
VIII Special Munitions[7]	1	II & VII		10	8	6	12	16
X	5		450					

Table 3–15
Ammunition Requirements per 155 How Battery (1x8: TRC C) Artillery Table Descriptive Training Strategy—Continued

Artillery		Critical						
Table/Event	Freq	Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
XI	1	AT II & X		32	0	6	0	
Btry EXEVAL	1			75	8	6	12	
Btry CALFEX	1			75	8	6	12	
Bn EXEVAL	1			32	0	6	0	
Totals:								
Total per platoon (AT IV &V)			500	45	0	0	0	0
Total platoon tng (2 Platoons)			1000	90	0	0	0	0
Total per battery (AT VII & VIII CALFEX and EXEVAL)			750	290	24	18	36	16
Total battalion tng			2250	64	0	12	0	0
Battalion total[3,4,5]			4000	444	24	30	36	16

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 250; AT VIIs—250; AT Xs—450.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[4] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[5] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[6] Special munitions training strategy (smoke, WP, illum) .

Table 3–16
Ammunition Requirements per 155 Cavalry HOW Battery (1x6: TRC C) Artillery Table Descriptive Training Strategy

Artillery		Critical						
Table/Event	Freq	Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
VII	5		200					
VIII	2	II &VII		57				
VIII Special Munitions[5]	1	II &VII		8	6	6	12	8
X	5		200					
XI	1	AT II & X		24	0	6	0	
Btry EXEVAL	1			65	6	6	12	
Btry CALFEX	1			65	6	6	12	
Bn EXEVAL/CALFEX	1			24	0	6	0	
Totals:								
Total per battery (AT VII & VIII								
CALFEX and EXEVAL)			1000	252	18	18	36	8
Total battalion tng			1000	48	0	12	0	0

Table 3–16
Ammunition Requirements per 155 Cavalry HOW Battery (1x6: TRC C) Artillery Table Descriptive Training Strategy—Continued

Artillery		Critical						
Table/Event	Freq	Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
Battalion TOTAL[2,3,4]			2000	300	18	30	36	8

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 120; AT VIIs—160; AT Xs—224.

[2] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[3] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[4] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[5] Special munitions training strategy (smoke, WP, illum, RAP).

Table 3–17
Ammunition Requirements per 155-mm Separate How Btry (1x8: TRC A) (LID) Artillery Table Descriptive Training Strategy

		Artillery Tables						
Artillery		Critical	Rounds per Mission (plt/btry/bn)					
Table/Event	Freq	Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV[2]	2		250					
V2	2	AT II & IV		45	0	0	0	
VII	5		250					
VIII	5	II & VII		85				
VIII Special Munitions[7]	2	II &VII		10	8	6	0	16
X	5		350					
XI	5	AT II & X		77	0	6	18	
Btry EXEVAL	1			95	8	6	0	
Btry CALFEX	7			95	8	6	0	
Bn EXEVAL	1			77	0	6	18	
Bn CALFEX	1			77	0	6	18	
Totals:								
Total per Platoon (AT IV &V)			500	90	0	0	0	0
Total Platoon Tng (2 platoons)			1000	180	0	0	0	0
Total per Battery[3] (AT VII & VIII CALFEX and EXEVAL)			1250	1229	80	60	0	16
Total Battalion Tng			1750	539	0	42	126	0
Battalion Total[4,5,6]			4000	1948	80	102	126	16

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 250; AT VIIs—250; AT Xs—350.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] Includes 24 rounds for an annual direct fire exercise.

[4] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[5] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464).

[6] Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[7] Special munitions training strategy (smoke, WP, illum) .

Table 3–18
Ammunition Requirements per 155-mm Separate HOW Btry (1x8: TRC C) (LID) Artillery Table Descriptive Training Strategy

Artillery		Critical						
Table/Event	Freq	Gates	Primers[1]	HE	Smoke	WP	Illum	RAP
DODIC			N523	D544	D528	D550	D505	D579
IV[2]	2		250					
V[2]	1	AT II & IV		33	0	0	0	
VII	5		250					
VIII	3	II & VII		53				
VIII Special Munitions[6]	1	II & VII		10	8	6	0	16
X	5		350					
XI	1	AT II & X		100	0	6	18	
Btry EXEVAL	1			63	8	6	0	
Btry CALFEX	7			63	8	6	0	
Bn EXEVAL/CALFEX	1			100	0	6	18	
Totals:								
Total per Platoon (AT IV &V)			500	33	0	0	0	
Total Platoon Tng (2 Platoons)			1000	66	0	0	0	0
Total per Battery (AT VII & VIII CALFEX and EXEVAL)			1250	673	72	54	0	
Total Battalion Tng			1750	200	0	12	36	16
Battalion Total[3,4,5]			4000	939	72	66	36	16

Notes:

[1] Primers are for use in training during nonfiring exercises: AT IVs receive 250 AT VIIs—250; AT Xs—350.

[2] Units that do not employ platoons will not use ATs III, IV and V. These units will increase the frequency of ATs VI, VII and VIII from three to five.

[3] M31 subcaliber ammunition per tube:
–3.5 sec delay: 5 (DODIC: A365)
–6 sec delay: 3 (DODIC: A366)
–PD: 38 (DODIC: A367)
–Total per tube: 46

[4] Fuzes to be used are Type (DODIC): PD (N340), Time (N285), MTSQ (N286), VT (N464). 5. Propellant charges by Type (DODIC): Green Bag (D540), White Bag (D541), and Red Bag (D533).

[6] Special munitions training strategy (smoke, WP, illum) .

Table 3–19
Annual Crew/Section Training Strategy (MLRS: TRC A/C) Artillery Table Descriptive Training Strategy

	Artillery Tables		Rounds per Mission	
Event	VIII	XI	Btry	Bn
On Call (ONC)	X	X	2	3
Fire When Ready (FWR)	X	X	2	6
At My Command (AMC)	X	X	2	6
Time On Target (TOT)	X	X	2	6
Time To Fire (TTF)	X	X	3	6
Timed Tine on Target (TTT)	X	X	3	9
Timed When Ready (TWR)	X	X	3	9
Multiple Fire Mission Sequence	X	X	4	18
Schedule of Fires	X	X	6	18

Table 3–19
Annual Crew/Section Training Strategy (MLRS: TRC A/C) Artillery Table Descriptive Training Strategy—Continued

	Artillery Tables		Rounds per Mission	
Event	VIII	XI	Btry	Bn
Totals:			27	81

Table 3–20
Annual ammunition Requirements per MLRS Battery (1X9: TRC A) Artillery Table Descriptive Training Strategy

Artillery Table Event	Freq	Critical Gates	Rounds per Mission Number of Rockets
IV	4		
V	1		
VII	4		
VIII	1	AT VII	27
Btry EXEVAL	1		27
Btry CALFEX	0		0
Total Btry Tng (AT VIII)			54

Table 3–21
Annual Ammunition requirements per MLRS Battery (1X9: TRC C) Artillery Table Descriptive Training Strategy

Artillery Table Event	Freq	Critical Gates	Rounds per Mission Number of Rockets
IV	4		
V	1		0
VII	4		
VIII	1	AT VII	27
Btry EXEVAL	1		0
Btry CALFEX	1		0
Totals			
Total Btry Tng (AT VIII)			27

Table 3–22
Annual Ammunition requirements per MLRS Battalion (3x9: TRC A) Artillery Table Descriptive Training Strategy

Events	Freq	Critical Gates	Number of Rockets
IV	4		
V	1		0
VII	4		
VIII	1	AT VII	27
X	4		
XI	1	AT X	54
Btry EXEVAL	0		0
Btry CALFEX	0		0
BN EXEVAL	1		27

Table 3–22
Annual Ammunition requirements per MLRS Battalion (3x9: TRC A) Artillery Table Descriptive Training Strategy—Continued

Events	Freq	Critical Gates	Number of Rockets
Bn CALFEX	0		
Totals			
Total Btry Tng (AT VIII)			81
Total Bn Training (3 Batteries)			81
AT XI, EXEVAL & CALFEX)			162

Table 3–23
Annual Ammunition requirements per MLRS Battalion (3x9: TRC C)Artillery Table Descriptive Training Strategy

Events	Freq	Critical Gates	Number of Rockets
IV	4		
V	1		0
VII	4		
VIII	1	AT VII	27
X	4		
XI	1	AT X	0
Btry EXEVAL	1		0
Btry CALFEX	1		0
BN EXEVAL	1		0
Bn CALFEX	1		
Totals			
Total Btry Tng (AT VIII)			27
AT VIII, AT XI, EXEVAL & CALFEX) (3 Batteries)			81

Table 3–24
Annual Aerial Fire Support Coordinator Ammunition for Units Supported by OH-58D Aircraft (TRC A)

Event	Freq	HE	Illum	Smoke
Adjust Fire with/without Night Vision Goggles (NVG) from aerial platform	2	3		
Adjust Fire using MMS 1 and ATHS 2	2	3		
Fire for Effect using MMS and ATHS	2	2		
Immediate Suppression Mission using MMS and voice procedures	2	2		
Adjust Illumination using ATHS	2		4	
Immediate Smoke using MMS and voice procedures		2		2
Irregular Shaped Target using MMS and voice procedures		2	3	
Subtotal: per iteration per AFSC		13	4	2
Total: AFSC x 2 iterations 3		26	8	4

Table 3–24
Annual Aerial Fire Support Coordinator Ammunition for Units Supported by OH-58D Aircraft (TRC A)—Continued

Event	Freq	HE	Illum	Smoke
DODIC:				
155-mm		D544	D505	D528
105-mm		C445	C449	C452

Notes:
[1] Mast Mounted Sight (MMS).
[2] Automatic Target Handoff System (ATHS).
[3] Total is to train one AFSC.

Table 3–25
Annual Training Strategy TRC D USAR Training Battalion

Event	Freq	Who
SL 1 and 2		
Tactical Techniques	1	All
ADFT	1	All
M31	1	All
LFX	1	All
SL 3 and 4		
Tactical Techniques	2	All
LFX	1	All

Table 3–26
Annual Ammunition Requirements per Individual (105/155-mm) TRC D USAR Training Battalion

Ammo	Phase I	Phase II	Phase III
105-mm HE	6	1	3
155-mm HE	6	1	3
WP		0.1	0.1
Ilum		0.1	0.1
Smoke		0.1	

Chapter 4
Air Defense Artillery Weapon Systems

Section I
Introduction

4–1. Standards, strategies, and requirements.

a. This chapter provides weapons standards, training strategies and resource requirements for units equipped with the MANPADS (Stinger), Avenger, Patriot and BSFV. The training programs provided have been specifically designed for each weapon system at two different TRCs. Each program contains a standard and strategy that outlines the training sequence and includes suggested frequencies of live fires, subcaliber, and use of devices. Table 4-1 is an index of weapons and weapon systems for which training programs have been written and approved. This table provides cross reference entries to the standard and strategy for each specific weapon or weapon system.

b. The objective is to assist field commanders in attaining and sustaining their standards by TRC and to ensure that acceptable levels of weapon proficiency are developed in all units.

c. The training strategies in this chapter are based on exercises in current FMs and ARTEPs. The specifics of each exercise will not be presented here; the appropriate manual must be consulted.

4–2. Training devices

a. General. Historically, Air Defense Artillery (ADA) has relied on extensive use of actual equipment and full caliber ammunition to train individuals, crews and platoons. The cost of ammunition is escalating and soldiers may be better trained on many critical tasks using devices and simulators. The emphasis has shifted to a combination of full caliber and subcaliber ammunition with devices and simulators integrated throughout the training programs.

b. Objective. Training devices aid sustainment training in garrison or local training areas. Devices enhance and sustain skills and, in some cases, may be the sole medium for training critical tasks.

c. Device list. The following devices are an integral part of the training strategies. Full caliber ammunition allocations are based on their use as presented in the strategies.

(1) *Radio controlled miniature aerial target (RCMAT).* The RCMAT is a reusable 1/9-scale aircraft target. It may be used for tracking and ranging practice by visually directed ADA weapons in addition to its suitability as a low cost firing target for Avenger, BSFV, MANPADS and small arms. Two individual configurations exist: MIG 27 and F-16. The RCMAT is soldier operated and available from Simulation, Training and Instrumentation Command (STRICOM) only.

(2) *MQM 107 Streaker training target.* The Streaker is a reusable turbojet-powered fixed-wing target. It may be configured to provide training for all ADA weapon systems through the use of mission tailored ancillary equipment and augmentation and radar reflectors. The Streaker system is government owned and contractor operated and may be set up at most ranges where ADA weapons are fired.

(3) *Aerial gunnery towed target.* This is a low cost, large size, high performance, towed (by the MQM 107 Streaker) aerial target that supports surface-to-air gunnery for Avenger (M3P), BSFV and small arms.

(4) *Remotely piloted vehicle target system (RPVTS).* The RPVTS consists of two 1/5-scale propeller driven target aircraft configured to resemble the SU-25 Frogfoot and the MI-24 Hind-D helicopter (AUTOGYRO). Each may be equipped with MILES/AGES and support Avenger and BSFV gunnery, small Arms and MANPADS/ Stinger live-fire training missions. Targets are government owned and contractor operated.

(5) *Infrared towed target (IRTT).* A high speed, subsonic, large size, low drag, low cost, infrared, aerial towed (by the MQM 107 Streaker) target that supports Air Defense infrared missile systems such as Stinger/MANPADS, Avenger, and BSFV.

(6) *Ballistic aerial target system (BATS).* BATS is a low-cost target for short-range Air Defense systems. It may be flown at low and medium altitudes and at speeds from 275 to 550 knots (140 to 285 meters per second). It is troop operated and may be maintained with minimum training. It is highly mobile and provides a reliable standby target for short-range Air Defense systems such as Avenger, BSFV, and Stinger-MANPADS. BATS is not suitable for gun systems nor air-to-air Stinger engagements.

(7) *Multiple integrated laser engagement system/air-to-ground engagement system/Air Defense (MILES/AGES/AD).* The MILES/ AGES/AD is available through local Training Support Centers (TSC). This training device provides a realistic training environment with real time hit/kill feedback for Avenger, Stinger and BSFV weapon systems. The system duplicates all engagement tasks through the use of laser firings. MILES is an approved eye-safe training device.

(8) *M60 field handling trainer (FHT).* The FHT is TOE equipment with the same size, weight, and external appearance as the Stinger weapon round. Soldiers use the FHT to practice the basic manual skills of weapon handling, operation, sighting, and ranging. The FHT also allows the gunner to practice mating and removing the grip stock, inserting and removing the battery coolant unit (BCU), and visually tracking aerial targets.

(9) *M134 training set guided missile.* This TOE assigned training set is commonly referred to by the name of its major component—tracking head trainer (THT). The THT duplicates all performances of the Stinger missile round, except launch. It is used to practice all Stinger engagement tasks and indicate gunner errors.

(10) *M160 RMP THT.* The Stinger training set M160 is used to train the Stinger gunners in the operation of the re-programmable microprocessor (RMP) Stinger weapon system. The M160 RMP provides training in improved IR/UV detection and has an improved performance indicator. The major difference between the M134 and the M160 is the M160 may have its flight software tailored for different threats by reprogramming (replacing) the read-only memory (ROM) module in the gripstock.

(11) *Stinger training launch simulator (STLS).* The STLS is a low-cost training device designed to give realistic live-fire training to Stinger gunners. The STLS equipment is available through local TSCs. The expendable eject missile is ordered through normal live training ammunition channels. STLS is a modified THT consisting of a launcher. The seeker is located below the launch tube which allows for ejection of a simulated round. The simulated round is propelled about 170 meters down range by a boost motor at the rear of the missile.

Note. DA funding requirements for STLS ammunition requires firing only at AIT level schooling. This does not preclude separate MACOM initiatives to fund and procure the STLS, using their own resources to support their training strategies. (STLS NSN: 6920-01-119-7619.)

(12) *Moving target simulator (MTS)/improved moving target simulator (IMTS).* The MTS/IMTS attains realism through the use of audio and video representations of moving aircraft against a larger simulated landscape setting. Students use the MTS/IMTS to simulate Stinger engagement and practice associated tasks. MTS/ IMTS are located at major installations in CONUS and OCONUS. Standards for IMTS remain the same.

(13) *IFF Subsystem Training Set.* This set evaluates gunner responses to stimulated IFF tones. The set is available at platoon headquarters and consists of an interrogator simulator, simulator case, and shipping/storage container. This item is used in place of the tactical interrogator for training purposes and is capable of producing three operating tones to the Stinger gunners.

(14) *Patriot troop proficiency trainer (TPT).* The TPT is a software program used to train information and coordination central (ICC) and engagement control systems (ECS) operators. It is also used to evaluate and maintain proficiency levels of current operators. The TPT may be programmed for battalion/battery exercise training.

(15) *Patriot live aircraft trainer (LAT).* The LAT is a version of the tactical software modified to track live targets and simulate their engagement.

(16) *Patriot conduct-of-fire trainer (P-COFT).* The P-COFT simulates the Patriot system displays, controls, communications and data processing systems at the operator and supervisory levels of the engagement control station and the information and coordination central.

(17) *Patriot missile round trainer (MRT).* The MRT is a training device that duplicates the external physical features of the missile canister and electronic characteristics of the guided missile. It consists of a canister with ballast permanently secured inside, which approximates the tactical guided missile's weight and center of gravity. It enables transportation, handling and load/unload training without the hazards of handling live explosives.

(18) *Stinger troop proficiency trainer (STPT).* The STPT is a computer-based device that superimposes one or more independently moving aerial target images and terrain backgrounds onto the optical sight of Stinger weapon systems. It provides the gunner with a visual representation of a realistic battlefield environment.

(19) *Avenger captive flight trainer (CFT).* The CFT is a missile simulator used to train operator tracking and engagement skills. The CFT is used in conjunction with RCMATs to train engagement procedures with live targets. The CFT consists of a Stinger-RMP missile guidance assembly, a ballasted launch tube and a container. The seeker and audio interface is the same as for the tactical missile, with electrical power and coolant provided by normal launcher sources.

(20) *U-COFT, M-COFT, and BSFV.* These are gunnery simulators that provide training in critical gunnery and procedural tasks for BSFV gunners, senior gunners, and squad leaders (vehicle commander). The basis of issue is one U-COFT per active component (AC) BSFV equipped battalion and one M-COFT per Reserve Component (RC) BSFV equipped battalion, and one M-COFT per RC BSFV equipped battalion. It is used to sustain gunnery proficiency between periods of full-caliber live fire. The COFT consists of a crew training shelter that replicates the turret stations of a BFV, an instructor/operator station and an integrated computer system capable of presenting an audiovisual replication of a combat environment. Computer-generated images are presented to the gunner and squad leader/commander through the optics of the BSFV fire control system. COFT has the capability to train individual and collective operational procedures, target acquisition/identification, target engagement, and adjustment of fire using primary or alternate fire control equipment.

(21) *Bradley subcaliber device.* A subcaliber device provides gunner and squad leader/commander training in target engagement and adjustment of fire in lieu of firing the 25-mm automatic gun. The device package consists of an M16 rifle, a mount for attaching

the rifle to the automatic gun and a drive motor compensation for superelevation of the automatic gun. A .22 caliber tracer may be utilized on 1/30- and 1/60-scale ranges with the installation of the rim fire adapter. When firing on 1/20-scale ranges, 5.56-mm tracer ammunition is used. The current bracket requires modification for the M2A2 BSFV.

(22) *Stout Board/M55 laser.* This device simulates 25-mm automatic gun fire by using a low-power gas laser. All operational procedures and duties necessary to fire the automatic gun are permissible, with the exception of the burst-on-target method of adjustment. The device package consists of an M55 laser trainer, a magnetic plywood board, one-half inch targets for attachment to the board and corresponding one-half inch or full-scale targets for range emplacement. The M55 laser is not used against full-scale targets.

(23) *M240 machine gun.* The M240C coax machine gun may be used to fire BSFV subcaliber tables on 1/5- to 1/2-scale and full-scale ranges. It may be employed on a full-scale range using one-half scale targets to allow the senior gunner to use proper ranging procedures.

(24) *Precision gunnery system (PGS).* This is a vehicle-appended gunnery training device for the BSFV that uses eye-safe lasers and retro-reflectors. PGS is interfaced with vehicle electronics and its operation is transparent to the crew. It is interoperable with MILES, remoted target systems (RETS), thru-sight video (TSV), the Hoffman device, and area weapon effects signature simulator (AWESS). This device supports precision gunnery, downgraded gunnery and force-on-force training with main gun, coax and TOW.

(25) *M70-series guided missile simulator.* The M70 training set is a crew portable trainer designed for use with the TOW 2 weapon system to provide gunner indoctrination, tracking instructions, practice, and qualification. This training set consists of a target set and a missile simulator round (MSR). The instructor's console is used to monitor and evaluate the response and tracking performance of the TOW senior gunner. The MSR is the same size, shape and approximate weight as the tactical TOW missile.

(26) *Cartridge.* 25-mm dummy M794 (linked) (DODAC 1305-A967). The dummy round is a replica of the 25-mm BSFV live round. It is an inert assembly used for training tasks associated with loading and unloading the ready boxes, immediate action on the 25-mm, unloading and clearing the 25-mm gun and loading the 25-mm feeder.

(27) *Missile simulator round (MSR).* The MSR is a dummy TOW round casing that has been weighted to simulate the actual TOW round. The MSR is an inert assembly that comes in a crate the same as an actual round. It is a nonexpendable major end item that may be requisitioned through the supply system. The MSR may be used to train tasks associated with upload of the BSFV, upload of the TOW launcher, applying immediate action on the TOW subsystem, removing a misfired TOW and unloading and stowing a TOW to its storage configuration.

(28) *Infrared pole target.* The IR pole target is a low-cost fixed target for short-range Air Defense systems. The IR signature is similar to an outgoing/crossing rotary wing threat or a hovering helicopter. The IR source is four electrically powered stove top elements mounted on a 2-by-2-foot aluminum plate attached to the center of an 8-by-8 foot frame covered with chain-link fence wire. This target frame is suspended by steel cable between two power poles approximately 70 feet long. These poles are installed six feet into the ground and equipped with an electric winch and pulley system to facilitate rapid replacement of the IR target elements, if the target is hit. The IR pole is generally a permanent structure at the following training sites: Forts Stewart, Hood, Polk, Drum, Bliss and Irwin. Details may be obtained from MACOM Target Management Office. This target is suitable for Stinger engagements from all launch platforms.

(29) *Scoring augmentation.* Scoring augmentation is available for installation on the BATS, MQM 107 IR towed target (IRTT), MQM 107 aerial gunnery towed target, MQM 107 towed banner, 1/5-scale RPVTS and 1/9-scale RCMAT. Immediate feedback of scoring data is available by detecting and counting bullets and/or missile miss distance indications (MDI) that penetrate a predetermined RF field around the target. Scoring devices are government owned with contractor services.

(30) *TRX-4A radar tow target.* This is a high speed, subsonic, low drag, low cost, radar aerial target towed by the MQM 107 Streaker. Wing mounted and launched from the MQM 107, the TRX-4A is used for radar systems such as Patriot.

Section II
Training Programs

4–3. Development

Training programs have been developed for each TRC level. The standard is stated at the beginning of each program. The individual training strategy is given first, followed by the training of the squad, crew, and/or platoon. Proficiency is achieved through the use of dry-fire exercises, subcaliber exercises, use of devices, and full caliber live-fire exercises. Ammunition resources for each TRC level are discussed at the conclusion of each training program. The programs were developed on the assumption that training events will be evenly spaced throughout the training year. Resources availability (such as ranges) may allow a commander more live-fire opportunities of shorter duration. In this case, not all squads, crews, and platoons in the battalion will train at each opportunity.

4–4. Purpose and objectives on the training programs

Training programs provide a method for attaining and sustaining weapon proficiency throughout the training year. They ensure all crews and platoons in a battalion are adequately trained and able to sustain weapon proficiency.

4–5. Programs for MANPADS (Stinger)

a. TRC A.

(1) *Standard.*

(a) Ninety percent of all teams assigned (team leader and gunner) must have qualified by each correctly engaging four out of five hostile presentations with no fratricide, using either the appropriate Stinger troop proficiency trainer (STPT) scenarios, IMTS scenarios, or MTS reel 11 or 12 within the past 12 months.

(b) Ninety percent of all teams assigned must have trained to standard as specified in Stinger Drills, ARTEP 44-117-11-DRILL, within the past three months and received a trained (T) on related collective tasks as specified in ARTEP 44-117-11-MTP, Chapter 5.

(2) *Training strategy.* Team training strategy is given in Table 4-2. Unit training strategies for Stinger are given in Table 4-3. Ammunition requirement is one Stinger missile per four Stinger teams per year for a TRC A unit, when available. The total annual ATWESS cartridge requirements for Stinger are 50 cartridges per team. Recommended usage is 10 cartridges per team per LFX and battery or higher level FTX.

b. TRC C.

(1) Seventy percent of all teams assigned (team leader and gunner) must have qualified by each correctly engaging four out of five hostile presentations with no fratricide, using either the appropriate (STPT) scenarios, IMTS scenarios, or MTS reel 11 or 12 within the past training year (STPT will be use to qualify when no IMTS or MTS is available).

(2) Seventy percent of all teams assigned must have trained to standard, as specified in ARTEP 44-117-11-DRILL, within the past three months and received a (T) on related collective tasks as specified in ARTEP 44-117-11-MTP, Chapter 5.

(3) *Training strategy.* Team training strategy is given in Table 4-4. Unit training strategy is given in Table 4-5. Ammunition requirement is one Stinger missile per platoon per year for TRC C units, when available. The total annual ATWESS cartridge requirements for Stinger are 30 cartridges per team. Recommended use is 10 cartridges per team per CALFEX and battery or higher level FTX.

4–6. Programs for the Patriot

a. TRC A.

(1) *Standard.*

(a) All assigned crews will train to standard in either ARTEP 44-635-MTP or ARTEP 44-637-30-MTP and ARTEP drills as applicable.

(b) Seventy-five percent of all TCO/TCA (or TD/TDA) battle crews assigned must have qualified in the air battle management qualifications (troop proficiency trainer (TPT), crew drill, heavy raid scenario, point defense and area defense against ABTs and TBMs) with 80 percent or better asset protection, as measured by the computer and SMEs, within the past 12 months.

(c) Each firing battery must have qualified in the Patriot march order and emplacement crew drills per ARTEP 44-635-11-DRILL or ARTEP 44-635-13-DRILL and ARTEP 44-635-14-DRILL within the past 12 months and each firing battery must have qualified 87.5 percent of all launching section crews in the Patriot missile reload battle drill (ARTEP 44-635-13-DRILL) within the past 12 months.

(d) The headquarters and headquarters battery must have qualified in the Patriot march order and emplacement crew drills per ARTEP 44-635-12-DRILL, within the past 12 months.

(2) *Training Strategy.*

(a) Patriot training strategy is outlined in ARTEP 44-635-MTP (Combined Arms Training Strategy Appendix) and ARTEP 44-637-30-MTP.

(b) Crew training strategy is given in Table 4-6. Unit training strategy is given in Table 4-7.

(c) Ammunition requirement is based on total system validation with one missile per battery every other year when available.

b. TRC C.

(1) *Standard.*

(a) All assigned crews will train to the standards in either ARTEP 44-635-MTP or ARTEP 44-637-30-MTP and ARTEP drills as applicable.

(b) Seventy-five percent of all TCO/TCA (or TD/TDA) battle crews assigned must have qualified in the air battle management qualifications (TPT, crew drill, heavy raid scenario, point defense and area defense against ABTs and TBMs) with 80 percent or better asset protection, as measured by the computer and SMEs within the past 12 months.

(c) Each firing battery must have qualified in the Patriot march order and emplacement crew drills per ARTEP 44-635-11-DRILL, ARTEP 44-635-13-DRILL and ARTEP 44-635-14-DRILL, within the past 12 months; each firing battery must have qualified 87.5 percent of all launching section crews in the Patriot missile reload drill (ARTEP 44-635-13-DRILL) within the past 12 months.

(d) The headquarters and headquarters battery must have qualified in the Patriot march order and emplacement crew drills per ARTEP 44-635-12-DRILL, within the past 12 months.

(2) Training Strategy.

(a) Patriot training strategy is outlined in ARTEP 44-635-MTP (Combined Arms Training Strategy Appendix) and ARTEP 44-637-30-MTP.

(b) Crew training strategy is given in Table 4-8. Unit training strategy is given in Table 4-9.

(c) Ammunition requirement is based on total system validation with one missile per battery every other year, when available.

4–7. Programs for Avenger

a. TRC A.

(1) *Standards.*

(a) Ninety percent of all squads (squad leader and gunner) assigned must have qualified in all drills, as specified in ARTEP 44-117-21-DRILL, within the past three months and received trained (T) on related collective tasks, as specified in ARTEP 44-117-21-MTP, Chapter 5.

(b) Ninety percent of all squads must have met the standards for the M3P MG within the past 12 months, in accordance with Table 4-14 and Table 4-15. The annual ammunition requirements for the M3P MG are contained in Table 4-16.

(2) *Training strategy.* Avenger squad training strategy is given in Table 4-10. Unit training strategy is given Table 4-11. M3P MG engagement strategy is given in Table 4-14 and Table 4-15. Missile requirement is one Stinger missile for every three Avenger fire units, when available.

b. TRC C.

(1) *Standards.*

(a) Seventy percent of all squads (squad leader and gunner) assigned must have qualified in all drills, as specified in ARTEP 44-117-21-DRILL, within the past three training months and received (T) on related collective tasks, as specified in ARTEP 44-117-21-MTP, Chapter 5 .

(b) Seventy percent of all squads must have met the standards for the M3P MG within the past 12 training months in accordance with Table 4-14 and Table 4-15. The annual ammunition requirements for the M3P MG are contained in Table 4-16.

(2) *Training strategy.* Avenger squad training strategy is given in Table 4-10. Unit training strategy is given Table 4-11. M3P MG engagement strategy is given in Table 4-14 and Table 4-15. Missile requirement is one Stinger missile for every three Avenger fire units, when available.

4–8. Programs for the Bradley Stinger fighting vehicle

Individual/crew qualification requirements for the BSFV are contained in paragraph 5-5c. Collective training strategies for battle/crew drills are reflected in Tables 4-17 through 4-20.

Table 4–1
Air Defense Weapon Systems Training Index

Weapon	DODIC	Paragraph	Table
Branch Specific Weapons			
MANPADS	PL90/PL93	4-5	4-2, 4-3, 4-4, 4-5
Patriot	PA49	4-6	4-6, 4-7, 4-8, 4-9
Avenger	PL90/PL93/A557/Z598	4-7	4-10, 4-11, 4-12, 4-13, 4-14, 4-15, 4-16
BSFV	A940/A976, A068/A146, A131/ PL90/PL93	5-5c	4-17, 4-18, 4-19, 4-20, 5-16, 5-17, 5-18
Other Weapons Systems			
AT-4	A358, L367, C995	5-6	5-24
Rifle (M16A1/A2)	A071/A059, A068/A063, A080	5-9	5-39
Grenade Launcher M203	B546, B519, B535	5-9	5-44
Machine Gun M60	A143, A131, A111	5-8	5-30

Table 4–1
Air Defense Weapon Systems Training Index—Continued

Weapon	DODIC	Paragraph	Table
Machine Gun M2 HB	A555, A557, A598	5-8	5-33
Pistol (.45 Cal)	A475	5-9	5-46
Pistol (9-mm)	A363	5-9	5-46
Hand Grenades M228/M67	G878, G881	5-9	5-48
Claymore Mine M18A1	K143[1]	5-9	5-49, 5-50

Notes:
[1] If K145 is substituted for K143, units must order the accessories: M57 firing device, M40 Test Set, M4 Electric Blasting Cap, and M7 Bandoleer.

Table 4–2
Annual MANPADS Team Training Strategy (TRC A)

Event	Freq	How
Battle drills	50	M60 FHT
Tracking practice[1]	50	M160RMP THT/M134/RCMAT/MTS/IMTS/STPT[2]
MTS/IMTS EOCCT[3]	4	

Notes:
[1] Units will use the RCMAT or 1/5 scale targets when they are available.
[2] Units use the Stinger Troop Proficiency Trainer, if available.
[3] Use Moving Target Simulator, Improved Moving Target Simulator and/or End of Course Comprehensive Test as a diagnostic tool.

Table 4–3
Annual MANPADS Unit Training Strategy (TRC A)

Event	Freq	Level	ATWESS	DODIC
FTX[1]	4	Section/Team	0	
	4	Plt	0	
	2	Btry	15	L367
LFX[3]	1	Section[2]	10	PL90/PL93/L367
CALFEX	1	Plt	10	L367

Notes:
[1] One FTX will be externally evaluated per ARTEP 44-117-30-MTP, ARTEP 44-117-11-MTP and unit METL. Commanders have the prerogative to mix events.
[2] One section member will fire while all other available section members track with THT (one missile per section when available).
[3] Units will use BATS as the exclusive target (1/5-scale fixed or rotary wing targets may be substituted if BATS is not available) for live missile engagements.

Table 4–4
Annual MANPADS Team Training Strategy (TRC C)

Event	Freq	How
Battle drills	25	M60 FHT
Tracking practice[1,2]	25	M160RMP THT/M134/RCMAT/MTS/IMTS/STPT[2,3]
MTS/IMTS EOCCT[3]	1	

Notes:
[1] Units will use the RCMAT or 1/5 scale targets when they are available.
[2] Units use the Stinger Troop Proficiency Trainer, if available.
[3] Use Moving target simulator, end of course comprehensive test as a diagnostic tool.

Table 4–5
Annual MANPADS Unit Training Strategy (TRC C)

Event	Freq	Level	ATWESS	DODIC
FTX	1	Plt[1,3]	0	L367
	1	Btry[1,3]	10	L367
	1	Bn[1]	10	L367
LFX	1	Plt[2,4]	10	PL90/PL93/L367

Notes:
[1] FTX will be externally evaluated per ARTEP 44-117-30-MTP, ARTEP 44-117-11-MTP and unit METL.
[2] One Stinger missile is authorized per four Stinger Teams, when available.
[3] Commanders have the prerogative to intermix events.
[4] Units will use BATS as the exclusive target (1/5 scale fixed wing or rotary wing targets may be used if BATS is not available) for live missile engagements.

Table 4–6
Annual Patriot Crew Training Strategy (TRC A)

Event	CATS Table	Freq	How
Air Battle Training	III	104	Tactical Equipment
	V[1]	30	TPT
	VII[1]	30	TPT
	V[1]	30	P-COFT[2]
	VII[1]	30	P-COFT[2]
Crew Drills	II[1]	160	Tactical Equipment
	VI[1]	160	Tactical Equipment
	VII[1]	160	Tactical Equipment
Missile Reload	I	52	Tactical Equipment/MRT
Crew Drill	IV	52	Tactical Equipment/MRT

Notes:
[1] Refer to Patriot Gunnery Table in ARTEP 44-695-30-MTP
[2] When available.

Table 4–7
Annual Patriot Unit Training Strategy (TRC A)

Event	Freq	Level	DODIC
Patriot Proficiency Tng	52	Section	
TEWT	4	Btry	
MAPEX	4	Btry	
ADX	12	Btry	
CPX	4	Btry	
STX	4	Btry	
DEPEX	2	Bn	
FTX	3	Btry	
	1	Bn	
EXEVAL	2[1]	Btry	
	2[1]	Bn	
CTX	1	Bn	
LFX	1	Btry[2]	PA49

Notes:
[1] May be conducted in lieu of FTX.
[2] Each battery fires a missile once every two years, when available.

Table 4–8
Annual Patriot Crew Training Strategy (TRC C)

Event	CATS Table	Freq	How
Air Battle Training	III	52	Tactical Equipment
	V[1]	15	TPT
	VII[1]	15	TPT
	V[1]	15	P-COFT, when available
Crew Drills	II[1]	80	Tactical Equipment
	VI61	80	Tactical Equipment
	VII[1]	80	Tactical Equipment
Missile Reload			
Crew Drill	I, IV	26	Tactical Equipment/MRT

Notes:
[1] Refer to Patriot Gunnery Tables in ARTEP 44-695-30-MTP.

Table 4–9
Annual Patriot Unit Training Strategy (TRC C)

Event	Freq	Level	DODIC
Patriot Proficiency Tng	26	Section	
TEWT	2	Btry	
MAPEX	2	Btry	
ADX	6	Btry	
CPX	2	Btry	
STX	2	Btry	
DEPEX	1	Bn	
FTX	2	Btry	
	1	Bn	
EXEVAL	1[1]	Btry	
	1[1]	Bn	
CTX	1	Bn	
LFX	1	Btry	PA49

Notes:
[1] May be conducted in lieu of FTX.
[2] Each battery fires a missile every 2 years, when available.

Table 4–10
Avenger Squad Training Strategy (TRC A)

Event	Freq	How
Battle drills	50	Tact Equipment, FHT
Tracking Practice	50	Tact Equipment, TPT, Captive Flight Trainer,

Table 4–11
Avenger Unit Training Strategy (TRC A)

Event	Freq	Level	DODIC
FTX	2	Plt[1,3]	
	2	Btry[1,3]	
FTX/FOFT[4]	2	Bn[1,3]	
LFX	1	Sec[2,5]	PL90/PL93/A557

Notes:

[1] One FTX will be externally evaluated per ARTEP 44-117-31-MTP, ARTEP 44-117-21-MTP and unit METL.

[2] Missiles fired when available. One missile for every three fire units.

[3] FTX performed in accordance with METL and MTP. Commanders have the prerogative to intermix events.

[4] Force-on-force trainer.

[5] Units will use BATS as the Stinger target during live fire (1/5-scale fixed or rotary wing, IR towed target or mix of these may be used only if BATS is unavailable). The .50 cal MG target is the RCMAT (1/5-scale targets or towed banner may be used if RCMAT is not available). Scoring is required for .50 cal MG firings. If scoring devices are not available a subject matter expert must provide the assessment.

Table 4–12
Avenger Squad Training Strategy (TRC C)

Event	Freq	How
Drills	25	Tactical Equipment, FHT
Tracking Practice	25	Tactical Equipment, Captive Flight Trainer, MTS, IMTS

Table 4–13
Avenger Unit Training Strategy (TRC C)

Event	Freq	Level	DODIC
FTX	1	Plt[1] ,[3]Btry[1,3]	
	1		
FTX/FOFT[4]	1	Bn[1,3]	
LFX	1	Sec[2,5]	PL90/PL93/A557

Notes:

[1] FTX will be externally evaluated per ARTEP 44-117-30-MTP, ARTEP 44-117-11-MTP and unit METL.

[2] Missiles fired when available. One missile for every three fire units.

[3] Commanders have the prerogative to intermix events.

[4] Force-on-force trainer.

[5] Units will use BATS as the Stinger target during live fire (1/5-scale fixed or rotary wing, IR towed target or mix of these may be used only if BATS is unavailable). The .50 cal MG target is the RCMAT (1/5-scale targets or towed banner may be used if RCMAT is not available). Scoring is required for .50 cal MG firings. If scoring devices are not available a subject matter expert must provide the assessment.

Table 4–14
Avenger M3P MG Practice Engagements

Engagement	Target	Course	Range KM	Alt/Speed[2]
I	Ground[3]	Static	.4-.6	
II	Ground[3]	Static	.6-.9	
III	Ground[3]	Moving or static	.4-.6	
IV	Ground[3]	Moving or static	.6-.9	
V	Aerial	Crossing level Outbound	.2-.8	
VI	Aerial	Crossing diving Inbound	.2-.8	
VII	Aerial	Crossing level Outbound	.2-.8	
VIII	Aerial	Crossing diving Inbound	.2-.8	

Table 4–14
Avenger M3P MG Practice Engagements—Continued

Engagement	Target	Course	Range KM	Alt/Speed[2]
IX	Aerial	Incoming	.2-.8	

Notes:

[1] Qualification standard:

TRC A. 90 percent of all squad leaders and gunners must have qualified by hitting 2 out of 5 aerial targets and 2 out of 4 ground targets with no fratricide, as recorded by subject matter expert or scoring device.

TRC C 70 percent of all squad leaders and gunners must have qualified by hitting 2 out of 5 aerial targets and 2 out of 4 ground targets with no fratricide, as recorded by subject matter expert or scoring device.

[2] Based on weather conditions, aerial target's airworthiness and its ability to reach altitudes and operational speeds.

[3] Units will use available ground targets.

Table 4–15
Avenger M3P MG Qualification Engagements

Engagement	Target	Course	Range KM	Alt/Speed[2]
I	Ground[3]	Static	.2-.4	
II	Ground[3]	Moving or static	.4-.7	
III	Ground[3]	Static	.8- 1	
IV	Ground[3]	Moving or static	.8-1	
V	Aerial	Crossing level Outbound	.2-.8	
VI	Aerial	Crossing diving Inbound	.2-.8	
VII	Aerial	Crossing level Outbound	.2-.8	
VIII	Aerial	Crossing diving Inbound	.2-.8	
IX	Aerial	Incoming	.2-.8	

Notes:

[1]

[1] Qualification standards:

TRC A—90 percent of all squad leaders and gunners must have qualified by hitting 3 out of 5 aerial targets and 3 out of 4 ground targets as recorded by subject matter expert or scoring device.

TRC C—70 percent of all squad leaders and gunners must have qualified by hitting 3 out of 5 aerial targets and 3 out of 4 ground targets as recorded by subject matter expert or scoring device.

[2] Based on weather conditions, aerial target's airworthiness and its ability to reach altitudes and operational speeds.

[3] Units will use available targets.

[4] Units will use BATS as the Stinger target during live fire (1/5-scale fixed or rotary wing, IR towed target or mix of these may be used only if BATS is unavailable). The .50 cal MG target is the RCMAT (1/5-scale targets or towed banner may be used if RCMAT is not available). Scoring is required for .50 cal MG firings. If scoring devices are not available a subject matter expert must provide the assessment.

Table 4–16
Breakdown of Annual Ammunition Requirements and Training Strategy for Avenger M3P MG

	Rounds per Event		Rounds per Event		
	(Table 4-14[1]) (Practice)		(Table 4-15[1]) (Qualification)		DODIC
Engagement	SL	G	SL	G	
I	25 Mix	25 Mix	25 Mix	25 Mix	
II	25 Mix	25 Mix	25 Mix	25 Mix	
III	25 Mix	25 Mix	25 Mix	25 Mix	
IV	25 Mix	25 Mix	25 Mix	25 Mix	
V	25 Mix	25 Mix	50 Mix	50 Mix	
VI	25 Mix	25 Mix	50 Mix	50 Mix	
VII	25 Mix	25 Mix	50 Mix	50 Mix	

Table 4–16
Breakdown of Annual Ammunition Requirements and Training Strategy for Avenger M3P MG—Continued

	Rounds per Event (Table 4-14[1]) (Practice)		Rounds per Event (Table 4-15[1]) (Qualification)		
Engagement	SL	G	SL	G	DODIC
VIII	25 Mix	25 Mix	50 Mix	50 Mix	
IX	25 Mix	25 Mix	25 Mix	50 Mix	
Bn ARTEP		100 Blanks		100 Blanks	
Subtotal per Avenger	225 Mix	225 Mix 100 Blanks	325 Mix	350 Mix 100 Blanks	A557 A598
Total Rounds per Avenger: 1125 Mix/ 200 Blank					

Notes:
[1] TRC A units will fire annually. TRC C units will fire once per training year.

Table 4–17
Annual BSFV Squad Training Strategy (TRC A)

Event	Freq	How
Battle/Crew Drills	50	M60 FHT/M794 Dummy Rds/M240C TOW Simulators/PGS/LTID/U-COFT/MILES
Tracking practice[3]	50	M160RMP THT/M134/Targets[2]/MTS[1]/U-COFT IMTS/PGS
MTS EOCCT[1]	4	

Notes:
[1] Use Moving Target Simulator, End of Course Comprehensive Test as a diagnostic tool.
[2] Targets: Units will use the RCMAT or 1/5 scale fixed wing or rotary wing when they are available.
[3] Units use the Stinger Troop Proficiency Trainer, if available.

Table 4–18
Annual BSFV Unit Training Strategy (TRC A)

Event	Freq	Level
FTX[1]	4 4 2	Plt Btry Bn
LFX	1	Squad[2,3,4]

Notes:
[1] One FTX will be externally evaluated.
[2] One squad member will fire while all other available squad members track with THT (one missile per four BSFV when available).
[3] Units will use BATS, RCMAT 1/9, 1/5 scale fixed or rotary wing, IRTT and or a mix with scoring devices except for missile firing. If scoring devices are not available, subject matter experts will be used to score hits/kills.
[4] Practice/Qualification for aerial gunnery for 25-mm will be done with MILES or PGS equipped 1/5-scale fixed or rotary wing targets when 25-mm rounds are not available for squad aerial practice/qualification.

Table 4–19
Annual BSFV Squad Training Strategy (TRC C)

Event	Freq	How
Battle/Crew drills	25	M60 FHT/M794 Dummy Rds /M240C TOW Simulators/PGS/LTID/U-COFT/MILES
Tracking practice	25	M160RMP THT/M134/Targets[1]/MTS/U-COFT IMTS/PGS/STPT[2]

Table 4–19
Annual BSFV Squad Training Strategy (TRC C)—Continued

Event	Freq	How
MTS EOCCT[3]	2	

Notes:
[1] Targets: Units will use the RCMAT or 1/5 scale fixed wing or rotary wing when they are available.
[2] Units use the Stinger Troop Proficiency Trainer, if available.
[3] Use Moving Target Simulator, End of Course Comprehensive Test as a diagnostic tool.

Table 4–20
Annual BSFV Unit Training Strategy (TRC C)

Event	Freq	Level
FTX[1]	2[3,4] 2[3,4] 1[4]	Plt Btry Bn
LFX	1[4]	Squad[2]

Notes:
[1] One FTX will be externally evaluated.
[2] One squad member will fire while all other available squad members track with THT (one missile per four BSFV when available).
[3] Utilize MILES and/or PGS.
[4] Per two training years.

Chapter 5
Infantry Weapon Systems

Section I
Introduction

5–1. Standards, strategies, and requirements

a. This chapter provides weapon standards, training strategies and resource requirements for units equipped with the Bradley fighting vehicle (M2 and M3), antiarmor Weapons (TOW/ITV, Dragon, AT-4), mortars (60-mm, 81-mm, 107-mm, 120-mm), machine guns (M60/M240B MMG, M2 HB HMG, MK 19 GMG) and individual weapons (M16A1/A2 Rifle, M4 carbine, M21/M24 sniper rifle, M3A1 SMG, M249 AR, M203 grenade launcher), pistols (M1911A1 .45 caliber pistol, 9-mm Pistol, .38 caliber revolver), hand grenade, M18A1/A2 Claymore mine and shotgun. Also included is the H & K MP5 submachine gun carried by some CID agents, the .50 caliber Barrett sniper rifle and the M240 mounted on the FOX NBC vehicle. The training programs provided have been specifically designed for each weapon system at four different TRCs: TRC A, active Army; TRC B, National Guard Enhanced Brigades; TRC C, USAR and other National Guard units; and TRC D, Reserve training divisions. Each program contains a standard and strategy that outlines the training sequence and includes suggested frequencies of live fire, subcaliber fire, and use of devices. Tables 5-3 and 5-4 show an index of Infantry and CS/CSS weapons and weapon systems for which training programs have been written and approved. Table 5-5 provides cross reference entries to the standard and strategy for each weapon or weapon system.

b. The objective is to assist field commanders to attain and sustain TRC standards and to ensure acceptable levels of weapon proficiency are developed in all units.

c. Training strategies in this chapter are not necessarily based on exercises in current FMs and ARTEPs. (The specifics of each exercise will not be presented here; the appropriate manual will have to be consulted.) *Due to ammunition constraints STRAC may not support the exercises in the FMs and ARTEPs. All soldiers may qualify with their assigned and/or designated weapons prior to deployment, if they have not qualified within six months of deployment date.*

d. As noted in AR 350-41, MACOM commanders are authorized to approve the use of prescribed alternate methods and modified or subcaliber courses when the unit conducting training does not have reasonable access to adequate range facilities. All other modifications must be approved by the proponent. MACOM commanders are authorized to waive qualification requirements.

e. Training programs for some weapon systems have been divided into two categories: Category I and Category II. Each program contains a standard and a strategy that outlines the training sequence and includes suggested frequencies of live fire, subcaliber fire, and use of devices.

(1) Category I applies only to soldiers with an 11B or 11M military occupational specialty (MOS) assigned to an Infantry rifle platoon or 19D or 11B assigned to a Scout platoon/long-range surveillance detachment (LRSD). Combat engineers assigned to heavy divisions are included in this category for the M2 HB MG only. This category also applies to Military Police platoons and to 11H soldiers assigned to D company of airborne/air assault units for the MK 19 only. For the Claymore mine, Combat Engineers are resourced as Category I. Both individual and collective weapon training standards and strategies have been developed for this category.

(2) Category II applies to all other soldiers not identified as Category I. Only individual training standards and strategies have been developed for this category.

f. Some training strategies do not reflect all firing exercises authorized for a particular weapon system. Examples are military operations on urban terrain (MOUT) and small arms Air Defense (SAAD). These exercises should be scheduled and executed as required by the commander's mission essential task list (METL), when time and resources permit.

5–2. Training devices

a. General. The Infantry continues to rely on extensive use of actual equipment, full caliber ammunition and training devices to train individuals, crews and platoons. However, missile training strategies emphasize the use of training devices as the primary means of training for TOW, Dragon, and AT-4 in accordance with DA policy.

b. Objective. Training devices aid sustainment training in garrison and local training areas. Devices enhance and sustain skills and, in some cases, may be the sole medium for training critical tasks. Use of devices is more effective under the tutelage of a trained instructor.

c. Device list. The following devices are an integral part of the

training strategies. Full caliber ammunition allocations are based on their use as presented in the strategies.

(1) *Unit conduct-of-fire trainer (U-COFT)/mobile conduct-of-fire trainer (M-COFT).* These gunnery simulators provide training in critical gunnery and procedural tasks for Bradley gunners and vehicle commanders. The basis of issue is one U-COFT per AC Bradley equipped battalion or squadron and one M-COFT per RC Bradley equipped battalion or squadron. They will be used to sustain gunnery proficiency between periods of full caliber live fire. The COFT consists of a gunner and commander station, an instructor/operator station, and integrated visual, audio and computer subsystems. Computer generated images are presented to the gunner and commander through the optics of the Bradley fire control system. COFT is capable of training individual and collective operational procedures, target acquisition/identification, target engagement and adjustment of fire using primary or alternate fire control equipment.

(2) *M240C machine-gun.* The M240C coax machine-gun may be used to fire BFV subcaliber tables III, IV, and V on 1/10-scale, 1/5-scale, 1/2-scale and full-scale ranges. It may also be employed on a full-scale range using 1/2-scale targets to allow the gunner to use proper ranging procedures.

(3) *Precision gunnery system.* This is a vehicle appended gunnery training device for the BFV that utilizes eye-safe lasers and retro-reflectors. PGS is interfaced with vehicle electronics and is transparent to the crew. It may be used in conjunction with MILES, RETS, TSV, the Hoffman device and automatic weapons effects signature simulator (ATWESS). This device supports precision gunnery for BT I, II, III, IV, and XII, as well as degraded gunnery and limited force-on-force training with main gun, coax and TOW.

Note. Active Army Bradley units (Infantry/Cavalry/Scouts) equipped with the PGS will be decremented one iteration of BT IX and BT X (Cavalry/Scout) or BT XI and BT XII (Infantry).

(4) *Dragon field handling trainer.* The FHT simulates the configuration of the Dragon tactical round. Trainers use the FHT in lieu of the Dragon tactical round and launch effects trainer (LET) when conducting field handling exercises to prevent unnecessary damage to the tactical round and LET. The FHT (used with the tracker) will aid gunners and trainers in performing and evaluating the preparatory marksmanship steps (positions, sighting and aiming, breathing and tracking).

(5) *Precision gunnery training system (PGTS).* The PGTS is a family of five complimentary trainers replacing M57 LET and M70 TOW trainers. These devices include—

(a) TOW gunnery trainer (TGT). (trainer, gunnery, antitank: AN/TWQ-T1, Army Device No. 07-77). The TGT is a videodisc based trainer designed for use in a classroom, maintenance bay, or ship troop bay. It consists of an instructor console and student station consisting of a simulated sight unit attached to the user's TOW 2 tripod and traversing unit. Each TGT comes with an optical disc library of gunnery scenarios. These scenarios are presented in day view or thermal modes, include visual and aural launch effects, and contain a mix of threat and friendly vehicles. Gunner performance is reported as HIT or MISS with miss distance and tracking score. The TGT is a Training Support Center (TSC) item. It replaces the M70 TOW Trainer in unit TOEs.

(b) TOW field tactical trainer (TFTT). (trainer, guided missile: AN/TWQ-T3, Army device No. 07-78). The TFTT is an eye-safe, precision-laser range device configured to resemble actual TOW components. The TFTT appends to a TOW 2 launcher, temporarily converting it to a high fidelity precision trainer. The TFTT operates from vehicle or battery power and uses the M80 TOW blast simulator. The TFTT operates from the tripod or M966 HMMWV TOW. The TFTT operates in all weather from a range of 200 to 3750 meters and uses standard range targets or vehicle targets equipped with a laser retro-reflector. The TFTT may be used in limited force-on-force exercises, if target vehicles also have MILES detector belts installed.

(c) Improved TOW vehicle (ITV) field tactical trainer (FTT) (trainer, guided missile. AN/TWQ-T5, Army device No. 07-123). The ITV FTT is an alternate design to the TOW FTT configured for use on the M901A1 improved TOW vehicle. The ITV FTT will also operate from the tripod or M966 HMMWV TOW.

(d) Dragon gunnery trainer (DGT) (trainer, gunnery, antitank: AN/TWQ-2 Army device No 07-76). The DGT has the features of the TGT but uses a simulated Dragon launcher. Launch effects and flight characteristics are seen, felt, and heard by the gunner. The DGT is a training support center item. It replaces the M57 launch effects.

(e) Dragon field tactical trainer (DFTT). (trainer, guided missile: AN/TWQ-T4, Army device No. 07-79). The DFTT is similar to the TFTT, but configured to resemble Dragon missile components. The DFTT accepts either the Dragon day tracker or night sight. The DFTT also uses the M80 TOW blast simulator. The DFTT operates from a range of 200 to 1000 meters.

(6) *LAW-M190 subcaliber launcher.* The M190 subcaliber launcher is made by converting expended LAW launchers. The unit armorer requisitions the items required to convert a fired LAW launcher to the subcaliber launcher through supply channels. The M190 may be used for all phases of LAW gunnery. The subcaliber rocket simulates the noise, smoke, blast and flight trajectory of the tactical rocket.

(7) . The 81-mm insert for the 120-mm mortar (M303). This insert consists of an 81-mm (M29A1) barrel, a filler block and a sleeve that fits inside the 120-mm barrel. It is capable of firing 81-mm 300 series ammunition to include the training ammunition (M880 SRTR). The 81-mm barrel insert device is intended to meet all training requirements for the mortar system. The insert permits firing all of the ARTEP critical tasks thereby training all of the indirect fire team (FO, FDC, and crews).

(8) *LAW/AT-4 field handling trainer.* Units will receive an initial issue of these devices through their local TSC. This device satisfies LAW/AT-4 gunners' requirements to conduct target acquisition and procedural gunnery tasks during instructional and unit training without actual live fire.

(9) *AT-4 tracer trainer.* The tracer trainer is a specially designed AT-4 launcher that accepts a special rifle barrel that fires a downloaded 9-mm tracer bullet. This device simulates the AT-4 weapon in weight, balance, physical characteristics, and gunner operation. The 9-mm bullet replicates the flight trajectory of the tactical rocket. Expended tactical launchers cannot be converted to tracer trainers. Tracer trainers are listed as a separate line item with replaceable parts.

(10) *Short-range training round (SRTR).* The SRTR is either a 60-mm (M766) or an 81-mm (M880) round with the appropriate refurbishment kit (class V item). The SRTR has one-tenth the range of a full service round, but is ballistically similar. The SRTR is a device for training all elements of the indirect fire team. It provides the forward observer with a sound/visual signal by which he can spot rounds and make adjustments. The fire direction center (FDC) computes actual data. The gun crew places data obtained from the FDC on the gun and drops a life-size round down the tube. The entire team functions exactly as in a live-fire exercise. The SRTR is designed to supplement and enhance the total mortar training program. It does require a designated mortar training range/area and should not be fired into a live-fire/HE impact area. Crews must use a special tool kit, available at each installation, to safely recover and refurbish either the M880 or the M766 cartridge. SRTR is employed using either 60-mm or 81-mm weapon systems or the 107-mm or 120-mm systems with the appropriate insertable sleeve.

(11) *60-mm subcaliber mortar, M31.* The 60-mm subcaliber mortar, M31, is a 60-mm mortar cannon modified to allow it to be inserted into a 107-mm (4.2-inch) mortar cannon. This allows all elements of the indirect fire team to conduct realistic training without the high cost of firing 107-mm (4.2-inch) ammunition. Only B627 60-mm illumination, B269 60-mm TP, B634 60-mm TP, B630 60-mm WP, B632 60-mm HE and B645 60-mm Practice rounds may be utilized. The new family of 60-mm mortar ammunition cannot be fired in this subcaliber device.

(12) *Machine gun recoil amplifier,* . 50 caliber, M3. The M2 HB machine gun recoil amplifier boosts the power that is required to cycle the weapon effectively when using the M858 .50 caliber short-

range plastic practice tracer cartridges. This ammunition enables realistic training to be carried out at considerably shorter distances with greatly reduced danger areas. Standard M33 ball (service) ammunition cannot be used when the recoil amplifier is attached to the weapon. A discriminator *must* be installed in the feed tray of the gun when the recoil amplifier is in use. The discriminator restricts the entry of M33 service ammunition into the feed tray of the M2 HB machine gun but permits the shorter plastic cartridges to feed.

(13) *Multiple integrated laser engagement system.* The MILES is very effective, eye-safe laser system is used with several weapon systems and blank ammunition. It provides a means to train and sustain combat skills in a realistic force-on-force environment using actual equipment. It enhances realism in force-on-force tactical exercises and develops weapon proficiency, as well as many individual and collective combat skills. The system provides real-time feedback to both the individual soldier and leaders.

(14) *Weaponeer.*

(a) The weaponeer is an effective marksmanship training device that closely approximates the live fire of an M16A1/A2 rifle. The system consists of a standard M16A1 rifle that has been modified and is non-restorable. Realistic sound is provided through a headset. Recoil is provided by a rod attached to the front of the weapon. The target assembly contains a zero target, 25- to 250-meter scaled targets and the capability to present various target arrays encountered on live-field and record fire ranges.

(b) The weaponeer may be used in two ways. First, it may be used to teach basic skills and diagnose shooting problems. Second, it may be used to practice and reinforce certain shooting exercises. The weaponeer is not acceptable as a substitute for record qualification firing.

(15) *Multipurpose arcade combat simulator (MACS).* The MACS is an inexpensive part-task trainer used with the M16A1/A2. MACS was designed to train and sustain marksmanship skills and has been validated through extensive testing. The system consists of a super Nintendo microprocessor or a modified Zenith computer, 13-inch color monitor, specially designed long-distance light pen and mount that attaches to the M16 rifle. Some versions use a permanent mount on a demilitarized rifle. The system is activated by a program cartridge that contains several training exercises. MACS may be acquired for less than $2000 by contacting the Training Support Center, Ft Benning, GA. MACS provides additional practice for those units that do not have access to adequate range facilities or have other resource constraints.

(16) . The 5.56-mm short range training ammunition (SRTA). The SRTA may be used in lieu of 5.56 ball or .22 caliber rim-fire adapter (RFA) for the tasks outlined in the rifle strategies on a 25-meter range. The ammunition must be used with the M2 bolt assembly. SRTA should only be used for record fire when full caliber cannot be used.

(17) *Bolt Assembly, 5.* 56-mm, M2. The M2 bolt assembly is a training device used with short-range training ammunition (SRTA). This special bolt, designed to be interchangeable between the M16A1, M16A2 and M4 Carbine, is required to cycle the rifle when it is firing SRTA. Use of this bolt converts these rifles from gas-operated weapons to blowback-operated weapons.

(18) *Target box exercise.* The target box is used to teach and permit a soldier to practice placement of the aiming point. It requires a rifle, rifle rest, plain piece of paper, pencil and coach/trainer.

(19) *Riddle sighting device.* This device is used to train correct sight picture. It is attached to the weapon's front sight post and then moved until the soldier obtains the correct sight picture. A coach/trainer checks the sight picture using an M16 sighting device.

(20) *M16 sighting device.* The M16 sighting device is a metal frame with a tinted glass reflector. When attached to the rear sight, the device permits the coach/trainer to observe, at a right angle, the firer's sight alignment and aiming point. It may be used with live- or dry-fire training.

(21) *M151A1 aiming card.* This is a simple cardboard aid designed to demonstrate rifle sight alignment and point of aim. It may be used to evaluate and/or teach the fundamental skill.

(22) *Dime/washer exercise.* This is a technique to teach or evaluate the skill of trigger pull. A coach/trainer places a dime or washer on the firer's weapon barrel just forward of the front sight. During dry-fire, if the proper trigger pull (squeeze) is executed, the dime/washer will remain on the barrel when the hammer falls. When using M16A2 rifle, a piece of 3/4" bonding material (tape, cardboard) is folded into a clothes pin shape and inserted into the compensator of the rifle so the dime/washer may be placed on top of the compensator.

(23) *Night firing, target mechanism, small arms M40.* This is a portable electromechanical control mechanism that comes with fifteen targets that are used in the night firing of small arms on non-remoted target system ranges. A counter/flasher chassis assembly records hits made by the firer and causes the muzzle flash simulator lights on each target to blink on command.

(24) *Videodisc gunnery simulator (VIGS).* The VIGS is a table-top gunnery trainer designed for training only the TRC B Bradley gunner. It consists of a simulated gunner's station with all weapons and controls similar to those in the Bradley. The graphics for this system comes from the videodisc. All tasks are programmable, which allows the supervisor to retrain. Each system is packed with five discs. Each disc progresses in difficulty in combat situations, number of targets, movement of targets, and movement of the Bradley. The gunner may train alone with a simulated BC to provide fire commands and to lay the weapon system for direction.

(25) *The 81-mm insert for the 120-mm mortar.* The 81-mm insert consists of an 81-mm (M29A1) barrel, a filler block and a sleeve that fits inside the 120-mm barrel. It fires the 81-mm 300/800/900 series round, including the training ammunition (M880 SRTR). The 81-mm barrel insert device is intended to meet all training requirements for the 120-mm mortar system. The insert permits firing all of the ARTEP critical tasks, thereby training all of the indirect fire team (FO, FDC and crews).

(26) *Shoot/don't shoot stress training device (SDSSTD).* The SDSSTD is a single system simulator trainer that provides preliminary marksmanship training on the 9-mm Beretta pistol and 12-gauge shotgun. This system has up to 40 SDSSTD scenarios to train law enforcement personnel. The SDSSTD training is conducted in a classroom environment. Training with the SDSSTD is conducted on large screen (7' x 9') video projection. Results are provided by replay or printed record.

(27) *Engagement skills trainer (EST).* EST is a multipurpose marksmanship training device. The technology is essentially the same as the SDSSTD but with marksmanship training scenarios for all Infantry Squad weapons: M16, M203, M249, M9. Other weapons that may be adapted to the system include the MK 19 GMG, .50 Cal MG, M60/M240B MG and AT-4. Training scenarios used are based on Marine Corps programs of instruction. The device is being fielded within the National Guard and the AC is reviewing for acceptance.

(28) *Javelin training devices.* Three devices are associated with the Javelin: basic skills trainer, field tactical trainer, and missile simulation round.

(a) Basic skills trainer (BST). The BST consists of a student station and an instructor station. It is an indoor/shipboard training device that can test the gunner's skills in a wide variety of situations. The student station consists of a simulated command launch unit (CLU) and simulated missile round (SMR). The instructor station consists of a color video display screen, an 80386-based microcomputer, hard and floppy disk drives, a keyboard, and an air conditioner. The instructor station allows the instructor to view all of the gunner's actions and to create new training exercises. The BST runs engagement exercises that are displayed as computer-generated images in the simulated CLU.

(b) Field tactical trainer (FTT). The FTT consists of a simulated round (SR) and an instructor station. The FTT is designed to be used as an outdoor trainer and is equipped with the MILES.

(c) Missile simulation round. The MSR consists of a sealed

launch tube that contains no instruments or circuitry. It simulates the weight and balance of the round and has CLU and battery coolant unit (BCU) connectors. The MSR is used to train gunners how to maintain, handle, and carry the round.

(29) *Training device index.* Unit training programs must include the judicious use of aids and devices. The TSC should be the primary source for these aids.

(a) Information concerning the classification of various type aids and the publications that provide up-to-date information are listed in table 5-1.

Table 5–1
Training Device Index

Type: Graphic training aids (GTA)
Description: Charts, handout cards, diagrams, posters, overhead transparencies, 35-mm slides and small plastic aids.
Source publication: DA Pam 108-1, " Index Army Motion Picture and related Audiovisual Aids."

Type: Training devices (TD)
Description: Three dimensional training aids (such as scale models and simulators).
Source publication: DA Pam 310-12, " Index and Description of Army Training Devices."

Type: Audiovisuals (AV)
Description: Motion pictures, audio cassette tapes and video tapes.
Source publication: DA Pam 108-1 and TRADOC Pam 350-33, " Educational Video Tape Catalog.""

Type: Training film
Description: Audiovisual 8-mm film
Source publication: Extension training

(b) To further assist in the selection of appropriate aids, many of the available M16 training aids and their identification numbers are listed in table 5-2. An assessment of the training value of each aid/device is indicated by the number 1, 2, or 3. These numbers indicate the following ratings:

- 1—recommended for unit training, (items will remain in the system).
- 2—may be used, but needs to be updated, (items are being updated or replaced, but will be in the system for a considerable period of time).
- 3—outdated and not recommended for unit training. (These items are under consideration for elimination from the system or will be replaced by updated items. However, it may be some time before all of these items are eliminated from the local TSC.)

Table 5–2
M16 training aids

Type: Training device (TD)
Nomenclature: Weaponeer—rifle marksmanship trainer
ID number: DVC 7-57
Rating: 1

Type: Training device (TD)
Nomenclature: M16 sighting device
ID number: DVC-T 7-84
Rating: 1

Type: Training device (TD)
Nomenclature: Target box paddle
ID number: DVC-T 7-86
Rating: 1

Type: Training device (TD)
Nomenclature: Riddle device
ID number: DVC-T 7-87

Table 5–2
M16 training aids —Continued

Rating: 1

Type: Training device (TD)
Nomenclature: M16 rifle brass deflector
ID number: DVC-T 23-30
Rating: 1

Type: Training device (TD)
Nomenclature: M15A1 aiming card
ID number: NSN 6910-00-716-0930
Rating: 1

Type: Training device (TD)
Nomenclature: M16A1 disassembly mat
ID number: TADA-34 (locally fabricated)
Rating: 1

Type: Training device (TD)
Nomenclature: Rifle rest (for target box exercise)
ID number: TA-D-12 (locally fabricated)
Rating: 1

Type: Training device (TD)
Nomenclature: Rifle rest (portable)
ID number: TA-D-12 (locally fabricated)
Rating: 1

Type: Training device (TD)
Nomenclature: Front and rear sight, M16 rifle
ID number: TA-D-26
Rating: 1

Type: Training device (TD)
Nomenclature: Rotating panel chalkboard holder for GTA charts
ID number: TA-D-4 (locally fabricated)
Rating: 1

Type: Training device (TD)
Nomenclature: Sight picture, rifle and pistol
ID number: TA-D-10
Rating: 3

Type: Training device (TD)
Nomenclature: Sighting aiming bar
ID number: TA-D-11
Rating: 3

Type: Training device (TD)
Nomenclature: Sighting disc
ID number: TA-D-13
Rating: 3

Type: Training device (TD)
Nomenclature: Windage clock
ID number: TA-D-14
Rating: 2

Type: Training device (TD)
Nomenclature: Rifle, M16-plastic working model, 3 to 1 scale
ID number: TA-D-32
Rating: 2

Type: Training device (TD)
Nomenclature: Rifle, M16-plastic, working model, 2 to 1 scale
ID number: TA-D-34

Table 5–2
M16 training aids —Continued

Rating: 2

Type: Training device (TD)
Nomenclature: Rifle, M16-plastic, actual size, no working parts
ID number: TA-D-65
Rating: 2

Type: Training device (TD)
Nomenclature: Marksmanship device with spotters
ID number: TA-D-109
Rating: 3

Type: Graphic training aid (GTA)
Nomenclature: Rifle 5.56, M16A1 mechanical training-1973
ID number: GTA 7-1-26
Rating: 1

Type: Graphic training aid (GTA)
Nomenclature: Rifle, M16 disassemble
ID number: GTA 9-6-43
Rating: 1

Type: Graphic training aid (GTA)
Nomenclature: M16A1 rifle malfunction
ID number: GTA 9-6-44
Rating: 1

Type: Graphic training aid (GTA)
Nomenclature: M16A1 rifle maintenance card
ID number: GTA 21-1-3
Rating: 1

Type: Training films (TF)
Nomenclature: Weapons safety—Part I M16A1 rifle (1973)
ID number: TF 7-4584
Rating: 1 (Also available on video tape)

Type: Training films (TF)
Nomenclature: Rifle, M16A1—Part I, care cleaning, lubrication
ID number: TF 21-3907
Rating: 1 (Also available on video tape)

Type: Training films (TF)
Nomenclature: Rifle, M16A1—Part II field expedients
ID number: TF 21-3908
Rating: 1 (Also available on video tape)

Type: Training films (TF)
Nomenclature: Rifle marksmanship target detection (1963)
ID number: TF 7-3319
Rating: 2

Type: Training films (TF)
Nomenclature: Fundamentals of rifle marksmanship (1972)
ID number: TF 7-4320
Rating: 3

Type: Videotapes (VT)
Nomenclature: Engagement of moving personnel targets with the M16A1 rifle team from the foxhole position
ID number: 2I/010-071-1271-B
Rating: 1

Type: Videotapes (VT)
Nomenclature: Cycle of functioning M16A1 rifle

Table 5–2
M16 training aids —Continued

ID number: 2E/071-0444-B
Rating: 1

Type: Videotapes (VT)
Nomenclature: Overview of BRM training
ID number: 010-071-0086-B
Rating: 1

Type: Videotapes (VT)
Nomenclature: Briefing on BRM (1987)
ID number: 2E/010-071-0725-D
Rating: 1

Section II
Training Programs

5–3. Development

Notional training programs have been developed for each TRC level. Infantry weapon systems and combat support/combat service support (CS/CSS) weapons that have written training programs are identified in table 5-3 and 5-4. The standard is stated at the beginning of each program. The individual training strategy is given first, followed by the training of the squad, crew and/or platoon. Proficiency is achieved through the use of devices, dry fire, subcaliber and full caliber live-fire exercises. Ammunition resources for each TRC level are discussed at the conclusion of each training program. The programs were developed on the assumption that training events will be evenly spaced throughout the training year. Resource availability (such as ranges) may allow a commander more live-fire opportunities of shorter duration. In this case, not all squads, crews and platoons in the battalion would train at each opportunity.

Table 5–3
Infantry Weapons Systems Training Index

Weapon	Paragraph	Table
BFV M2	5-5	5-6, 5-8, 5-9, 5-10
BFV M2 w/PGS	5-5	5-7
CFV M3	5-5	5-11,5-13,5-14,5-15
CFV M3 w/PGS	5-5	5-12
BSFV M2/M3	5-5	5-16, 5-17, 5-18
BFSV	5-5	5-19
TOW/HMMWV/ITV	5-6	5-20
Dragon	5-6	5-21
Javelin	5-6	5-22
AT-4	5-6	5-23, 5-24
60-mm Mortar	5-7	5-25
81-mm Mortar	5-7	5-26
107-mm Mortar	5-7	5-27
120-mm Mortar	5-7	5-28
Machine gun M60 /M240B (Category I, II)	5-8	5-29, 5-30
Fox M240 (Category II)	5-8	5-31
Machine gun M2 HB (Category I, II)	5-8	5-32, 5-33
Machine gun MK 19 (Category I, II)	5-8	5-34 5-35
M249 Automatic Rifle (AR)	5-8	5-36, 5-37
Rifle (M16A1/A2) Carbine (M4A1)	5-9	5-38, 5-39
M21/M24 Sniper Rifle	5-9	5-40
M82A1 Sniper Rifle (Category II)	5-9	5-41
M3A1	5-9	5-42
M203 Grenade Launcher (Category I, II)	5-9	5-43, 5-44
Pistols (M1911A1, M9, .38 Cal Revolver)	5-9	5-45,5-46
Hand Grenade (Category I, II)	5-9	5-47 5-48

Table 5–3
Infantry Weapons Systems Training Index—Continued

Weapon	Paragraph	Table
Claymore Mine (M18A1/A2) (Category I, II)	5-9	5-49, 5-50
Shotgun	5-9	5-51
H & K SMG 9-mm	5-9	5-52
Mines and Demolitions	6-12, 6-13	6-28, 6-29, 6-30, 6-31, 6-32, 6-33, 6-34

Table 5–4
CS/CSS Weapons System Training Index

Weapon	Paragraph	Table
AT-4 (includes LAW)	5-6	5-23,5-24
Machine Gun (M60/240B) (Category II)	5-8	5-30
Machine Gun (M240) (Fox) (Category II)	5-8	5-31
Machine Gun (M2 HB) (Category II)	5-8	5-33
Machine Gun (MK 19) (Category II)	5-8	5-35
M249 Automatic Rifle (AR) (Category II)	5-8	5-37
Rifle (M16A1/A2) Carbine (M4A1) (Category II)	5-9	5-39
Sniper Rifle M82A1	5-9	5-41
M3A1 SMG	5-9	5-42
Grenade Launcher (M203) (Category II)	5-9	5-44
Pistols (M1911A1, M9, .38 Cal Revolver)	5-9	5-45,
MP/CID/SRT Pistol	5-9	5-46
Hand Grenades (M228) (Category II)	5-9	5-48
Claymore Mines (M18A1/A2) (Category I, II)	5-9	5-49, 5-50
M1200 Shotgun	5-9	5-51
H & K MP5 SMG 9-mm	5-9	5-52
Mines (Other)	6-23	6-57, 6-58

5–4. Purpose and objectives of the training programs

Training programs will provide a method for the attainment and sustainment of weapon proficiency throughout the training year. They will ensure that all crews and platoons in a battalion are adequately trained and able to sustain weapon proficiency.

5–5. Programs for the Bradley infantry fighting vehicle (M2 and M3)

a. Bradley fighting vehicle (M2). The following standards are for each TRC. Recommended training strategies and ammunition resources are given in table 5-6 and 5-7 (PGS) for TRC A, table 5-8 for TRC B, table 5-9 for TRC C and table 5-10 for TRC D USAR training battalion.

(1) *TRC A standard.* All BFV crews must qualify on the Bradley Crew Proficiency Course prior to live firing. Eighty-five percent of the mechanized battalion's assigned primary crews and 85 percent of the platoon leader alternate M2 crews will have qualified on Table VIII within the past six months. All platoon crews and the platoon leader alternate crew must qualify on BT VIII before attempting BT XII. Seventy-five percent of the rifle platoons will have qualified on Table XII within the past 12 months. All Infantry squads, alone or as part of a larger unit, will have successfully participated in a dismounted LFX to standard (ARTEP 7-8-MTP/7-7J-MTP FM 23-1) within the past six months. All platoons will have successfully completed an external evaluation to ARTEP 7-8-MTP (ARTEP 7-7J-MTP) standards while participating in a company or battalion FTX within the past six months.

Note. Battalions equipped with the PGS will be allocated ammunition for only one iteration of BT XI and BT XII. The second iteration will be conducted with the PGS.

(2) *TRC B standard.* All BFV crews must qualify on the Bradley Crew Proficiency Course prior to live firing. Eighty-five percent of the mechanized battalion's assigned primary crews and 85 percent of the platoon leader alternate M2 crews will have qualified on Table VIII within the past training year. All dismounted Infantry squads will have successfully participated in a LFX to standard (ARTEP 7-8-MTP/7-7J-MTP/FM 23-1) within the past training year. All platoons will have successfully completed an external evaluation to ARTEP 7-8-MTP (ARTEP 7-7J) standards within the past training year.

(3) *TRC C standard.* Fifty percent of assigned BFV crews will qualify on Table VIIIA/B every other training year. Bradley equipped platoons will conduct a platoon EXEVAL in the non-gunnery training year.

(4) *TRC D USAR training battalion standard.* All M2 Bradley Fighting Vehicle committee instructors will have certified on the Bradley Gunner Skills Test (BGST), and conducted sustainment crew device based gunnery (Tables I and II) within the past 12 months. Committee instructors will have conducted sustainment live-fire training (Tables VI, VII, and VIII) within the past 36 months.

b. Bradley Cavalry fighting vehicle (M3). The following standards are for each TRC. Recommended training strategies and ammunition resources are given in table 5-11 and 5-12 (PGS) for TRC A, table 5-13 for TRC B, table 5-14 for TRC C and table 5-15 for TRC D USAR training battalion.

(1) *TRC A standard.* Eighty-five percent of the assigned crews will qualify on Bradley Table VIII A/B, two times per year. Eighty-five percent of sections within ACR and divisional Cavalry squadrons will qualify on Bradley Table X A/B two times per year. All tables will be executed in accordance with FM 23-1.

Note. Cavalry/Scout units equipped with PGS will be allocated ammunition for only one iteration of BT IX and BT X. The second iteration will be conducted with the PGS.

(2) *TRC B standard.* Sixty-six percent of the assigned Scout platoon crews will qualify on Bradley Table VIII A/B once during each training year. Units with M-COFT will conduct M-COFT training (troops average four hours per crew every other month).

(3) *TRC C standard.* Fifty percent of assigned crews will qualify on Table VIIIA/B every other training year. All sections will participate in an EXEVAL every other training year.

(4) *TRC D USAR training battalion.*

(a) Standard. All CMF 19D (D3) personnel will participate in gunnery training in accordance with the following phased training program:

(b) Phase I (SL1 qualification)

- No prior service: Graduates of OSUT (United States Army Armor Center (USAARMC)).
- Prior service: Graduates of 19D 10/20 reclassification course.

(c) Phase II (SL3 qualification). CMF 19D (D3) personnel who will graduate from 19D (D3) BNCOC (USAARMC) or from USAR BNCOC and either the Scout Commander's Certification Course (USAARMC) or 19D (D3) SOJT.

(d) Phase III (sustainment training). Each M3 commander (SL 3/4) will participate in the annual sustainment training outlined in table 5-15. Crews for these Bradley commanders will be formed from available cadre. Whenever possible, skill level 1 and 2 personnel will be used as crew members, as this training will provide their primary MOS specific gunnery training. Each M3 commander (SL 3/4) will participate in the live-fire training outlined in table 5-15 every three years. Crews for these Bradley commanders will be formed from available cadre. Whenever possible, skill level 1 and 2 personnel will be used as crew members, as this training will provide their primary live-fire gunnery training.

(e) Ammunition requirements. Ammunition requirements for sustainment are based on individual Bradley commanders to be trained. These requirements are given in table 5-15.

c. Bradley Stinger fighting vehicle. The standards are given for

each TRC. Recommended training strategies and ammunition resources are given in table 5-16 and 5-17 for TRC A and table 5-18 for TRC C.

(1) *TRC A.*

(a) Standard. Sixty-six percent of the AD battalion's assigned primary BSFV squads must have qualified on Tables VIII, IXa and Xa within the past 12 months. The BSFV crew must be qualified by position on the respective AD gunnery tables VIII, IXa and Xa as well as MANPADS Table VIII. Sixty-six percent of the assigned BSFV squads must have trained within the past three months to the standards specified in the BSFV ARTEP 44-177-14-DRILL. Sixty-six percent of the assigned squads must have met the qualifications standards of Tables IXa and Xa of FM 23-1, Chapter 14, Bradley Stinger fighting vehicle Air Defense gunnery within the past 12 months. Sixty-six percent of the assigned squads must have received an assessment rating of trained (T) on the related collective tasks as specified in ARTEP 44-177-14-MTP, Chapter 5 within the past 12 months.

(b) Training strategy. The BSFV training strategy is outlined in tables 5-16, 5-17 and 5-18 and in ARTEP 44-177-14-MTP (Combined Arms Training Strategy Annex). BSFV gunnery operations are outlined in the SFV AD Gunnery Manual; Stinger members training strategy is outlined in tables 4-2 and 4-3. Ammunition requirements are one Stinger missile when available per four fire units per year for TRC A units. The total recommended ATWESS cartridges is 10 cartridges per team per LFX and battery or higher level FTX.

(2) *TRC C.*

(a) Standard. Within the past two training years, sixty six percent of the AD battalion's assigned primary BSFV squads must have qualified on Table VIII (the BSFV crew must be qualified by position on the respective AD Gunnery Table VIII, FM 23-1, and MANPADS Table VIII). Sixty six percent of the assigned BSFV squads must have trained to the standards specified in the BSFV ARTEP 44-177-14- Drill within the past training six months. Within the past training year, sixty six percent of the assigned squads must have received an assessment (rating) of trained (T) on the related collective tasks specified in ARTEP 44-177-14-MTP, Chapter 5.

(b) Training Strategy. The BSFV training strategy is outlined in tables 5-16, 5-17 and 5-18 and ARTEP 44-177-14-MTP (Combined Arms Training Strategy Annex). BSFV gunnery operations are outlined in the FM 23-1, Chapter 14; Stinger training strategy is outlined in tables 4-4 and 4-5. Ammunition requirements are one Stinger missile per four fire units per year. The total recommended ATWESS cartridges is 10 cartridges per team per LFX and battery or higher level FTX.

Note. TRC C BSFV crews will conduct BSFV BT IXa and XA after mobilization.

d. Bradley fire support vehicle (BFSV). Fifty percent of vehicle crews will qualify on Bradley Table VIIIA/B annually. Crews will conduct training in accordance with table 5-19.

5–6. Programs for antiarmor weapons (TOW/ITV, Dragon, Javelin, AT-4, LAW)

a. TOW/HMMWV/ITV. The following standards are listed according to TRC. Recommended training strategies and ammunition resources are given in table 5-20.

(1) *TRC A.* All assigned 11H will have verified tracking skills using the TOW gunnery trainer (TGT) within the past four months. Eighty-five percent of assigned TOW squads will have qualified on Table VIII within the past six months. All TOW platoons must have qualified on Table XII within the past 6 months. Additionally, all TOW platoons will have satisfactorily completed an external evaluation in accordance with ARTEP 7-91-MTP within the past six months in conjunction with a maneuver company or battalion FTX. Tables will be fired with the TOW field tactical trainer (TFTT). TOW MILES may be used only when the TFTT is not available.

(2) *TRC B.* All assigned 11H will have verified tracking skills using the TOW Gunnery Trainer (TGT) within the past eight months. Seventy-five percent of assigned TOW squads will have qualified on Table VIII within the past training year. All TOW platoons must have qualified on Table XII within the past training year. Additionally, all TOW platoons will have satisfactorily completed an external evaluation in accordance with ARTEP 7-91-MTP within the past training year.

(3) *TRC C.* All assigned 11H will have successfully conducted instructional exercises through TOW table V A/B on the TOW gunnery table. Additionally, the crew will participate in section/squad/platoon situational training exercises to standard twice each year.

(4) *TRC D: USAR training battalion standard.* Eighty percent of the TOW committee instructors will have familiarized tracking skills using the TOW gunnery (GT) and TOW FTT or M70 and will have received a GO on all Javelin gunner's skill test task (FM 23-34) within the past 24 months.

b. Dragon (rifle/Scout/CBT Engineer). The standards by TRC are given below. Recommended training strategies and ammunition resources are given in table 5-21.

(1) *TRC A standard.* Ninety percent of the designated Dragon gunners and assistants will have verified tracking skills by scoring 16 hits of 20 shots in both the standing supported position and the sitting position with Dragon gunnery trainer or LET (FM 23-24) within the past three months. Each designated Dragon gunner assigned to an infantry squad or larger will have participated in an LFX to standard (ARTEP 7-8-MTP) within the last three months. All designated Dragon gunners will have successfully participated in a platoon external evaluation to standard (ARTEP 7-8-MTP) as part of a company or higher FTX within the past six months.

(2) *TRC B standard.* Seventy-five percent of the designated Dragon gunners will have verified tracking skills with the Dragon gunnery trainer (FM 23-24) within the past training year. Each designated Dragon gunner, as part of a squad or larger unit, will have participated in an LFX to standard (ARTEP 7-8-MTP) within the past training year. All designated Dragon gunners will have participated in a platoon external evaluation to ARTEP 7-8-MTP standards within the past training year.

(3) *TRC C.* Sixty percent of all gunners will qualify in accordance with FM 23-24 during the training year. Additionally, all designated gunners will participate in a squad/platoon/company field training exercise/situational training exercise during the training year.

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned Dragon committee instructors will have verified tracking skills using the Dragon gunnery trainer (PGTS) (FM 23-24) within the past 12 months. Eighty percent of the assigned drill sergeants involved in Dragon training will have verified tracking skills within the past 24 months.

c. Javelin (rifle/scout/CBT Engineer. The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-22.

(1) *TRC A standard.* Ninety percent of the designated Javelin gunners and assistants will have verified Javelin gunnery by scoring 75 percent on each BST sustainment Javelin exercise (FM 23-series) within the past three months. Each designated Javelin gunner assigned to an infantry squad or larger will have participated in a LFX to standard (ARTEP 7-8-MTP) within the last three months. All designated Javelin gunners will have successfully participated in a platoon external evaluation to standard (ARTEP 7-8-MTP) as part of a company or higher FTX within the past six months. All designated Javelin gunners will have received a GO on all Gunner Skill Test tasks (FM 23-series) within the past six months.

(2) *TRC B standard.* Seventy-five percent of the designated Javelin gunners will have verified lock-on and tracking skills with the BST (FM 23-series) within the past training year. Each designated Javelin gunner, as part of a squad or larger unit, will have participated in an LFX to standard (ARTEP 7-8-MTP) within the past training year. All designated Javelin gunners will have participated in a platoon external evaluation to ARTEP 7-8-MTP standards within the past training year. All designated Javelin gunners will have received a GO on all Gunner Skill Test Tasks (FM 23-series) within the past training year.

(3) *TRC C.* Sixty percent of all gunners will qualify in accordance with FM 23-series during the training year. Additionally, all designated gunners will participate in a squad/platoon/company field training exercise/situational training exercise during the training year.

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned Javelin committee instructors will have verified lock-on and tracking skills using the Javelin BST (FM 23-series) within the past 12 months. Eighty percent of the assigned drill sergeants involved in Javelin training will have verified lock-on and tracking skills within the past 24 months.

d. AT-4 (Category I). The standards by TRC are given below. Recommended training strategies and ammunition resources are given in table 5-23. The LAW may be substituted for AT-4 only if ammunition, subcaliber devices or ranges are not available to support AT-4.

(1) *TRC A Standard.* Three soldiers per rifle squad and two per scout squad will have met the individual requirements to standard by successfully engaging 9 of 14 targets with the 9-mm tracer trainer (FM 23-25, Appendix B, Tables III and IV) within the past six months. Each designated gunner, as part of a squad or larger unit, will have participated in an LFX to standard (ARTEP 7-8-MTP/7-92-MTP) within the past three months. All designated gunners will have successfully participated in a platoon external evaluation to standard (ARTEP 7-8-MTP) as part of a company or higher FTX within the past six months.

(2) *TRC B standard.* Two soldiers per rifle squad and two per Scout squad will have met the individual requirements to standard by successfully engaging 9 of 14 targets with the 9-mm tracer trainer (FM 23-25, Appendix B, Tables III and IV) within the past training year. Each designated gunner, as part of a squad or larger unit will have participated in an LFX to standard (ARTEP 7-8-MTP/7-92-MTP) within the past training year.

(3) *TRC C standard.* Two soldiers per rifle squad and two per Scout squad will have successfully completed tables I, II, and III (qualification) within the past training year. Each designated gunner, as part of a squad or larger unit will have participated in a squad/platoon/company FTX/STX and an EXEVAL at some level within the past training year.

e. AT-4 (Category II). The standards by TRC are given below. Recommended training strategies and ammunition resources are given in table 5-24. LAW may be substituted for AT-4 if ammunition, subcaliber devices or ranges are not available to support AT-4.

(1) *TRC A standard.* Ten percent of the assigned soldiers (SGT and below) will have met the individual requirements to standard by successfully engaging six of eight targets with the 9-mm tracer trainer (FM 23-25, Appendix B, Table III) within the past 12 months.

(2) *TRC B standard.* Ten percent of the assigned soldiers (SGT and below) will have met the individual requirements by successfully engaging six of eight targets with the 9-mm tracer trainer (FM 23-25, Appendix B, Table III) within the past two training years.

(3) *TRC C standard.* No training requirement.

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned AT-4 committee instructors will have fired the 9-mm tracer trainer (FM 23-25, Appendix B, Tables I and III) within the past 12 months. Eighty percent of the assigned Drill Sergeants will have fired the tracer trainer (FM 23-25, Appendix B, Table I) within the past 24 months. Only in cases where the AT-4 is not available will the M-72 LAW be used in training. All LAW training is considered to be instructional firing in accordance with table 5-24.

5–7. Programs for mortars (60-mm, 81-mm, 107-mm and 120-mm).

The standards by TRC are given below. Recommended training strategies and ammunition resources are given in: table 5-25, 60-mm; table 5-26, 81-mm; table 5-27, 107-mm; table 5-28, 120-mm.

a. TRC A standard. Ninety percent of all squad leaders, gunners and assistant gunners will have passed the mortar gunner's exam with a minimum score of 70 percent in each event (FM 23-90). Ninety percent of all section leaders, squad leaders and FDC personnel will have passed the FDC exam (FM 23-91) within the past six months. All mortar sections/platoons will have successfully completed an external evaluation to ARTEP 7-90-MTP and ARTEP 7-90-Drill standards as part of a company/battalion FTX within the past six months.

b. TRC B standard. Ninety percent of all squad leaders, gunners and assistant gunners will have passed the mortar gunner's exam (FM 23-90) and 90 percent of all section leaders, squad leaders and FDC personnel will have passed the FDC exam (FM 23-91) within the past training year. All mortar sections will have successfully completed an external evaluation to ARTEP 7-90-MTP and ARTEP 7-90-Drill standards in conjunction with an FTX within the past training year.

c. TRC C standard. Eighty percent of all squad leaders, gunners, and assistant gunners will have passed the mortar gunner's exam (FM 23-90) and 80 percent of all section leaders, squad leaders and FDC personnel will have passed the FDC exam (FM 23-91) within the past training year. All mortar sections will have successfully completed an external evaluation using the SRTR within the past training year.

d. TRC D USAR training battalion standard. Eighty percent of the assigned Mortar Gunnery Committee instructors and 11C drill sergeants will have passed the mortar gunner's exam (FM 23-91), the FDC Exam (FM 23-91) and fired one live round within the past 12 months.

5–8. Programs for machine guns (M60/M240B MMG/M2 HB .50 caliber HMG)

a. M60/M240B MMG (Category I). The standards are given by TRC. Recommended training strategies and ammunition resources are provided in table 5-29. Field Manuals: M60 MMG-0—FM 23-67; NBC firing/qualification has been integrated into other training/qualification events.

(1) *TRC A standard.* Ninety percent of the assigned machine gunners will have met the individual requirements to standard within the past six months; assistant machine gunners within the past year. Individual requirements consist of qualifying on the record courses in accordance with the appropriate FM. Record courses include 10 meter, transition and night transition. Each assigned machine gunner, as part of a squad or larger unit, will have participated in an LFX to standard (ARTEP 7-8-MTP) within the past three months. All assigned machine gunners will have successfully participated in a platoon external evaluation to standard (ARTEP 7-8-MTP) as part of a company or higher FTX within the past six months.

(2) *TRC B standard.* Eighty percent of the assigned machine gunners will have met the individual requirement within the past training year. Individual requirements consist of 10-meter record, transition record, and night record. Eighty percent of the assigned assistant gunners will have met the individual requirements within the past two training years. Each assigned machine gunner, as part of a squad or larger unit, will have participated in an LFX to standard (ARTEP 7-8-MTP) within the past training year. All assigned machine gunners will have participated in a platoon external evaluation to standard (ARTEP 7-8-MTP) within the past two training years. TRC C commanders may defer night fire to post mobilization training for units without appropriate night vision equipment and/or access to night fire ranges.

(3) *TRC C standard.* Eighty percent of assigned machine gunners will have qualified on the 10-meter exercise within the past training year. Designated assistant gunners will qualify on the 10-meter exercise every other training year.

b. M60/M240B MMG (Category II). The standards by TRC are given below. Recommended training strategies and ammunition resources are given in table 5-30.

(1) *TRC A standard.* Ninety percent of the assigned machine gunners will have met the individual requirements to standard with the machine gun within the past 12 months. Individual requirements consist of qualifying on the record courses in accordance with appropriate FM. Record courses include 10 meter, transition and night

transition. Ninety percent of the assigned assistant machine gunners will fire 10 meter to standard annually and fire all qualification requirements every two years.

(2) *TRC B standard.* Eighty percent of the assigned machine gunners will have qualified on the 10-meter qualification course during the past training year and will complete all record fire requirements within the past two training years. The assigned gunners/assistant gunners will have participated in a company FTX to standard within the past two training years. Assistant machine gunners will fire complete qualification requirements during post mobilization training.

(3) *TRC C standard.* Eighty percent of the assigned gunners will have qualified on the 10-meter qualification course during the past training year.

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned committee instructors will have qualified on the record (10-meter) course and transition course within the past 12 months and fired for record on the night record course within the past 24 months. Eighty percent of the assigned drill sergeants will have completed instructional firing (transition fire) with the MG within the past 24 months.

c. M2 HB . 50 caliber heavy machine gun Category I. The following standards are given by TRC. Recommended training strategies and ammunition resources are provided in table 5-32. Individual requirements for M2 HB .50 caliber HMG are found in FM 23-65. NBC firing/qualification has been integrated into other training/qualification events. In the machine gun tables, NBC is integrated into 10 meter, transition and night events.

(1) *TRC A standard.* Ninety percent of the assigned machine gunners will have met the individual requirements to standards within the past 12 months. Ninety percent of the assigned assistant gunners will have fired the 10-meter record within the past 12 months and completed all record fire requirements to standard within the past 24 months. Each assigned machine gun crew will have participated in an LFX to standard (ARTEP 7-8-MTP) within the past six months. All assigned machine gun crews will have successfully participated in a platoon external evaluation to standards within the past 12 months.

(2) *TRC Engineer standard.* Ninety percent of the assigned machine gunners will have met the individual requirements to standards within the past 12 months. Ninety percent of the assigned assistant gunners will have fired the 10-meter record within the past 12 months and completed all record fire requirements to standard within the past 24 months.

(3) *TRC B standard.* Same as M60/M240B MMG, paragraph 5-8a(2).

(4) *TRC C standard.* Same as the M60/M240B MMG, paragraph 5-8a(3).

d. M2 HB . 50 caliber HMG, Category II. The standards by TRC are given below. Recommended training strategies and ammunition resources are given in table 5-33.

(1) *TRC A standard.* Four personnel will fire the transition record course as instructional fire annually. The primary crew should fire all events in table 5-33 upon deployment notification.

(2) *TRC B standard.* One person will fire the 10-meter practice and record courses as instructional fire within the past training year.

(3) *TRC C standard.* One person will fire the 10-meter practice and record courses as instructional fire within the past training year.

e. MK-19 grenade machine gun (Category I). The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-34. NBC firing is integrated into other training and qualification events.

(1) *TRC A standard.* Ninety percent of the assigned MK 19 GMG gunners will have met the individual requirements to standard with the MK 19 GMG within the past six months, and 90 percent of the assistant gunners will have met the individual requirements to standard with the MK 19 GMG within the past 12 months. Individual requirements for the gunner consist of firing the transition and night record events (FM 23-27). The assistant gunners will fire transition record (FM 23-27). Each assigned MK 19 GMG gunner, as part of a squad or larger unit, will have participated in an LFX to standard (ARTEP 7-8-MTP and FM 23-27) within the past three months. All assigned MK 19 GMG gunners will have successfully participated in a platoon external evaluation to standard (ARTEP 7-8-MTP) as part of a company or battalion FTX within the past six months.

(2) *TRC MP standard.* Ninety percent of military police MK-19 gunners will qualify with the MK 19 within the past six months. Assistant gunners will qualify within the past 12 months.

(3) *TRC B standard.* Eighty percent of the assigned MK-19 GMG gunners will have met the individual requirements to standard with the MK 19 GMG within the past training year. Eighty percent of the assigned assistant gunners will have met the individual requirements to standard with the MK-19 GMG within the past two training years. Individual requirements for the gunner consist of firing the transition and night record events (FM 23-27). The assistant gunners will fire transition record (FM 23-27). Each assigned MK-19 GMG gunner will have participated, as part of a squad or larger unit, in an LFX to standard (ARTEP 7-8-MTP) within the past training year.

(4) *TRC C standard.* Seventy percent of assigned MK-19 gunners will qualify on the transition record course within the past training year.

f. MK-19 grenade machine gun (Category II). The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-35.

(1) *TRC A standard.* Ninety percent of the assigned MK-19 GMG gunners will have met the individual requirements to standard with the MK-19 GMG within the past 12 months. Individual requirements consist of firing the transition record every year and night record every other year (FM 23-27). The assistant gunners will fire transition record fire (FM 23-27) every other year.

(2) *TRC B standard.* Eighty percent of the assigned MK-19 GMG gunners will confirm zero/transition practice within the past training year. Gunners will qualify fully every two training years. Assistant gunners will fire T1 as instructional fire every two training years.

(3) *TRC C standard.* Seventy percent of the assigned MK-19 GMG gunners will fire the transition practice course for instructional purposes within the past training year.

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned MK-19 GMG committee instructors will have completed zero/transition practice (FM 23-27) within the past 12 months and transition/night events within the past 24 months. Eighty percent of the drill sergeants will have completed transition/night events (FM 23-27) within the past 24 months.

g. M249 automatic rifle (AR) (Category I). The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-36. NBC firing is integrated into other training and qualification events.

(1) *TRC A standard.* Ninety percent of the assigned M249 AR gunners will have met the individual requirements to standard with the AR within the past six months. Individual requirements consist of qualifying on the three record courses (FM 23-14). (Record courses include 10 meter, transition and night transition). Each assigned AR gunner will have participated, as part of a rifle/scout squad or larger unit, in an LFX to standard (ARTEP 7-8-MTP) within the past three months. All assigned gunners will have successfully participated in a platoon external evaluation to ARTEP 7-8-MTP standard as part of a company or battalion FTX within the past six months.

(2) *TRC B standard.* Eighty percent of the assigned M249 AR gunners will have met the individual requirements to standard within the past training year. Individual requirements consist of qualifying on the record courses (FM 23-14). Record courses include 10 meter, transition and night transition. Each assigned gunner, as part of a squad or larger unit, will have participated in an LFX to standard (ARTEP 7-8-MTP) within the past training year. All assigned gunners will have successfully participated in a platoon external evaluation to ARTEP 7-8-MTP standards within the past two training years.

(3) *TRC C standard.* Seventy percent of assigned M249 AR gunners will have qualified on the 10-meter and transition record courses within the past year. Additionally, gunners will have participated in at least one squad/platoon/company FTX/STX within the past training year and an EXEVAL (ARTEP) within the past two training years.

h. M249 AR (Category II). The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-37.

(1) *TRC A standard.* Ninety percent of the assigned M249 AR gunners will have met the individual requirements to standard with the AR within the past six months. Individual requirements consist of qualifying on the record courses (FM 23-14). Record courses include 10-meter, transition and night transition.

(2) *TRC B standard.* Eighty percent of the assigned AR gunners will have qualified on the 10-meter record course (FM 23-14) within the past training year. Transition and night transition record will be fired once every two training years.

(3) *TRC C standard.* Seventy percent of assigned gunners will conduct instructional firing on the 10-meter and transition courses within the past training year.

(4) *TRC D USAR battalion standard.* Eighty percent of the assigned committee instructors will have met the individual requirements to standard with the M249 AR within the past 12 months. Individual requirements consist of qualifying on the 10-meter and transition range courses (FM 23-14). In addition, firing night record to standard (FM 23-14) will have been completed within the past 24 months. Eighty percent of the assigned drill sergeants will have conducted instructional firing (10-meter) with the M249 AR within the past 24 months.

i. U.S. Army Criminal Investigation Command (CIC) standard for H & K MP5 submachine gun (9-mm). Ninety percent of the special agents assigned to the Protective Services Unit will have met the individual requirements to standard with the MP5 within the past three months. Individual requirements consist of qualifying on the CID protective service qualification course (CID Regulation 195-19) once each quarter. The recommended training strategy and ammunition resources are given in table 5-52.

5–9. Programs for small arms

a. M16A1/A2 rifle/M4 carbine (Category I). The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-38. All standards apply to the M16A1/A2, the M203 (rifle) and the M4 carbine.

(1) *TRC A standard.* Ninety percent of the soldiers assigned a rifle will have met the individual requirements to standard within the past six months. Individual requirements consist of qualifying on the day record fire course, NBC and the night record course to standard (FM 23-9). Each rifle/scout squad, individually or as part of a larger unit, will have participated in an LFX to standard (ARTEP 7-8 and 7-7J or 7-92-MTP) within the past three months. All infantry rifle platoons will have successfully completed an external evaluation to ARTEP 7-8-MTP or 7-7J-MTP standards while participating in a company or battalion FTX within the past six months.

(2) *TRC B standard.* Eighty percent of the soldiers assigned a rifle will have met the individual annual requirement to standard for the rifle within the past training year. The annual requirement consist of qualifying on the day record fire course (FM 23-9), NBC and the night record fire course. Each rifle/scout squad, individually or as part of a larger unit, will have participated in an LFX to standard (ARTEP 7-8, 7-7J or 7-92-MTP) within the past training year. All infantry rifle platoons will have successfully completed an external evaluation to ARTEP 7-8-MTP standards within the past two training years.

(3) *TRC C standard.* Seventy percent of the soldiers assigned a rifle will have successfully completed record qualification, NBC qualification and night qualification requirements within the past training year. Additionally, they will have participated in a squad/platoon/company FTX/STX within the past training year and an EXEVAL (ARTEP) within the past two training years.

b. M16A1/A2 and M4 carbine (Category II). The following standards are given by TRC and Special Reaction Teams. Recommended training strategies and ammunition resources are given in table 5-39.

(1) *TRC A standard.* Ninety percent of the soldiers assigned a rifle will have met the annual requirement for the rifle to standard within the past 12 months. The annual qualification consists of the day record fire course, NBC and the night record fire course (FM 23-9). Additionally, platoons will have successfully completed an external evaluation (ARTEP) within the past 12 months.

(2) *Special reaction team (SRT) standard.* Ninety percent of the personnel assigned a rifle will have met the individual requirements to standard for the rifle within the past 12 months. Individual requirements consist of qualifying on the day record fire course (FM 23-9) twice each training year. Firing in MOPP 4 (protective clothing) to standard (FM 23-9) will be accomplished once each training year.

(3) *TRC B standard.* Eighty percent of the soldiers assigned a rifle will have met the following requirements for each training year: Verifying zero, shooting the day practice and qualifying on the record course. The NBC record course will be fired to standard (FM 23-9) once every other training year. All soldiers will have participated in a squad/platoon/company FTX/STX. All platoons will participate in a company FTX after mobilization.

(4) *TRC C standard.* Eighty percent of the soldiers assigned a rifle will have met the following requirements for each training year: Verifying zero, shooting the day practice and qualifying on the record course. NBC and night fire will be fired after mobilization.

(5) *TRC D USAR training battalion standard.* Eighty percent of the assigned committee instructors and drill sergeants responsible for teaching or supervising rifle marksmanship training will have met the individual requirements to standard for the M16 rifle within the past 12 months. Individual requirements consist of qualifying on the day record fire course (FM 23-9). The NBC record course and firing night record will be conducted every two years.

c. M21/24 sniper rifle. The standards by TRC are given below. Recommended training strategies and ammunition resources are given in table 5-40.

(1) *TRC A/S standard.* All soldiers assigned an M21/24 sniper rifle will zero with iron sights and scope monthly and will fire qualification and night fire quarterly. Each TRC A sniper team, as part of a larger unit, will have participated in an LFX within the past three months. All TRC A sniper teams will have successfully completed an external evaluation to ARTEP 7-92-MTP standards while participating in a company or battalion FTX within the past 12 months.

(2) *TRC B/C standard.* All soldiers assigned an M21/24 sniper rifle will zero with iron sights and scope quarterly and fire qualification and night fire within the past four months. Each sniper team will have participated, as part of a larger unit, in an LFX to standard (ARTEP 7-92-MTP) within the past training year. All sniper teams will have successfully completed an external evaluation to ARTEP 7-92-MTP standards within the past training year.

d. M3A1 SMG. The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-42.

(1) *TRC A standard.* Ninety percent of the soldiers assigned an M3A1 SMG will have conducted instructional firing (FM 23-41) within the past 12 months.

(2) *TRC B/C standard.* Eighty percent of the soldiers assigned an M3A1 SMG will have conducted instructional firing (FM 23-41) within the past training year.

e. M203 grenade launcher (GL) (Category I). The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-43. This strategy applies to the grenade launcher only. All soldiers assigned this weapon must also meet M16 requirements. NBC firing is integrated with other training events.

(1) *TRC A standard.* Ninety percent of the soldiers assigned an M203 GL will have met the individual requirements to standard with the weapon within the past six months. Individual requirements

consist of qualifying to standard (FM 23-31). Each Infantry/Scout squad will have participated in a squad or platoon LFX to standard (ARTEP 7-8-MTP) within the past three months. All Infantry rifle platoons will have successfully completed an external evaluation to ARTEP 7-8-MTP standards while participating in a company or battalion FTX within the past 12 months.

(2) *TRC B/C standard.* Eighty percent of the soldiers assigned an M203 GL will have met the individual requirements to standard with the weapon within the past training year. Individual requirements consist of qualifying in accordance with FM 23-31. Each rifle/Scout squad will have participated in a squad or platoon LFX to standard (ARTEP 7-8-MTP) within the past training year. All Infantry rifle platoons will have successfully completed an external evaluation to ARTEP 7-8-MTP standards within the past two training years.

f. M203 grenade launcher (Category II). The following standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-44.

(1) *TRC A/S standard.* Ninety percent of the TRC A/S soldiers assigned an M203 GL will have met the individual requirements to standard within the past twelve months. Additionally, all TRC A soldiers will have conducted a live-fire exercise within the past twelve months. Individual requirements consist of qualifying in accordance with FM 23-31

(2) *TRC B standard.* Eighty percent of the soldiers assigned an M203 GL will have zeroed both the leaf and quadrant sights and have met the individual requirements to standard with the weapon within the past two training years. Individual requirements consist of qualifying in accordance with FM 23-31.

(3) *TRC C standard.* Eighty percent of the soldiers assigned an M203 GL will have zeroed both the leaf and quadrant sights annually. Individuals will qualify post mobilization in accordance with FM 23-31.

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned M203 GL committee instructors and drill sergeants will have met the individual requirements to standard for the M203 within the past 24 months. Individual requirements consist of qualifying in accordance with FM 23-31. In addition, these soldiers will have qualified in MOPP 4 (protective clothing) within the past 24 months.

g. Pistols (M1911A1/M9/.38 Cal). The standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-45. NBC and night firing is integrated into the basic qualification requirements.

(1) *TRC A standard.* Ninety percent of the soldiers assigned a pistol will have met the individual requirements to standard with the weapon within the past 12 months. Individual requirements consist of qualifying on the Combat Pistol Qualification Course (FM 23-35).

(2) *TRC B/C standard.* Eighty percent of the soldiers assigned a pistol will have met the individual requirements to standard with the weapon within the training year. Individual requirements consist of qualifying on the Combat Pistol Qualification Course (FM 23-35).

(3) *TRC D USAR training battalion standard.* Eighty percent of the assigned pistol committee instructors and drill sergeants will have met the individual requirements to standard with the pistol within the past 12 months. Individual requirements consist of qualifying on the Combat Pistol Qualification Course (FM 23-35).

h. Military Police, US Army CID and special reaction team standard for pistols and revolvers. The standards are given by TRC and SRT. Recommended training strategies and ammunition resources are given in table 5-46.

(1) *TRC A standard.* Ninety percent of the Military Police assigned a pistol or revolver will have met the individual requirements to standard with the weapon within the past 12 months. Individual requirements consist of qualifying on the MP firearms qualification course (FM 19-10) at least once within the past 12 months. The second qualification will be on either the MP firearms qualification course (FM 19-10) or the combat pistol qualification course (FM 23-35) as determined by the unit commander. Additionally, each soldier will have fired the Military Police Night Firearms Sustainment Course (MPNFSC) within the past 12 months to standard and will have fired in MOPP 4 to standard (FM 23-35).

(2) *SRT standard.* Ninety percent of the soldiers assigned a pistol or revolver will have met the individual requirements to standard with the weapon within the past three months. Individual requirements consist of qualifying on the MP firearms qualification course (FM 19-10), firing the Military Police night firearms sustainment course, and firing in MOPP 4 (protective clothing/protecting mask) to standard.

(3) *TRC B/C standard.* Eighty percent of the Military Police assigned a pistol or revolver will have met the individual requirements to standard with the weapon within the past training year. Individual requirements consist of qualifying on the MP firearms qualification course (FM 19-10) and firing the Military Police night firearms sustainment course within the past training year.

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned committee instructors and drill sergeants will have met the individual requirements to standard with the pistol/revolver within the past 12 months. Individual requirements consist of qualifying on the MP firearms qualification course (FM 19-10) annually and firing the night firearms sustainment course within the past 24 months. All other soldiers will have completed this program within the past 24 months.

i. CID standard. Ninety percent of special agents will have met the individual requirements to standard within the past three months. Individual requirements consist of qualifying on the CID special agent qualification course each quarter. See table 5-46 and CID Reg 195-19. Agents will have fired the night course within the past 12 months.

j. Hand grenade (Category I). The standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-47.

(1) *TRC A standard.* Ninety percent of all soldiers assigned to rifle/Scout squads will have thrown one live fragmentation hand grenade (FHG) within the past 12 months, have successfully negotiated the grenade course (FM 23-30) within the last six months and conducted practice grenade throwing in conjunction with a squad or platoon LFX within the past three months.

(2) *TRC B/C standard.* Eighty percent of all soldiers assigned to rifle/Infantry Scout squads will have successfully negotiated the grenade course (FM 23-30) and conducted practice grenade throwing in conjunction with a squad or platoon LFX within the past training year. A live hand grenade will be thrown once every two training years.

k. Hand grenade (Category II). The standards are given by TRC and SRT. Recommended training strategies and ammunition resources are given in table 5-48.

(1) *TRC A standard.* Ninety percent of all soldiers assigned to combat, CS, and CSS sections or platoons will have successfully negotiated the grenade course (FM 23-30) within the past twelve months. Ninety percent of all soldiers assigned will have thrown one live fragmentation hand grenade (FHG) within the past 24 months.

(2) *SRT standard.* Ninety percent of all soldiers assigned to a special reaction team will have successfully negotiated the grenade course (FM 23-30) within the past three months.

(3) *TRC B/C standard.* Soldiers will qualify on the hand grenade course post-mobilization.

(4) *TRC D USAR training battalion standard.* Soldiers will qualify on the grenade course after mobilization.

l. M18A1/A2 Claymore mine (Category I rifle/Scout/CBT Engineer). The standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-49.

(1) *TRC A standard.* Ninety percent of the assigned soldiers will have emplaced, armed and disarmed an inert Claymore mine to standard in accordance with STP 21-1 and Soldiers Manual of Common Tasks (SMCT) within the past three months. Each squad will have emplaced, armed, and fired one live Claymore mine during a squad or platoon LFX to standard (ARTEP 7-8-MTP) within the past three months.

(2) *TRC B/C standard.* Eighty percent of the assigned soldiers

will have emplaced, armed and disarmed an inert Claymore mine to standard in accordance with STP 21-1 and SMCT within the past six months. Each squad will have emplaced, armed, and fired one live Claymore mine during a squad or platoon LFX to standard (ARTEP 7-8-MTP) within the past training year.

m. M18A1/A2 Claymore Mine (Category II, combat arms, combat support/service support). The standards are given by TRC. Recommended training strategies and ammunition resources are given in table 5-50.

(1) *TRC A standard.* Ninety percent of the assigned soldiers will have emplaced, armed and disarmed an inert Claymore mine to standard in accordance with STP 21-1 and SMCT within the past six months.

(2) *TRC B/C standard.* Eighty percent of the assigned personnel will have emplaced, armed, and disarmed one inert Claymore mine in accordance with STP 21-1 and SMCT within the past training year.

(3) *TRC D USAR training battalion standard.* Eighty percent of the assigned M18A1/A2 Claymore mine committee instructors will have emplaced, armed, and disarmed one inert Claymore mine in accordance with STP 21-1 and SMCT within the past 12 months.

n. M1200 shotgun standard. The standards are given by TRC and SRT. The recommended training strategies and ammunition resources are given in table 5-51

(1) *TRC A standard.* Ninety percent of the soldiers and personnel assigned a shotgun will have met the individual requirements to standard with the weapon within the past 12 months. Individual requirements consist of those tasks identified in STP 19-95B1-SM.

(2) *SRT standard.* Ninety percent of the soldiers assigned a shotgun will have met the individual requirements to standard with the weapon within the past three months. Individual requirements consist of qualifying on the Military Police 12-Gauge Shotgun Qualification Course (FM 19-10).

(3) *TRC B/C standard.* Eighty percent of the soldiers assigned a shotgun will have met the individual requirements to standard with the weapon within the past training year

(4) *TRC D USAR training battalion standard.* Eighty percent of the assigned shotgun committee instructors will have conducted instructional fire and successfully qualified on the Military Police 12-Gauge Shotgun Qualification Course (FM 19-10) within the past 12 months.

o. M82A1 sniper rifle standard. TRC A standard is 75 percent of all engineer personnel assigned the M82A1 sniper rifle will qualify every six months in accordance with table 5-41.

p. Fox reconnaissance vehicle. M240G MMG standard is 80 percent of assigned Fox crews will qualify in accordance with Master Fox Scout Tables XI and XII every 12 months. The recommended strategy is given in table 5-31.

5–10. Programs for TDA units.

a. Standard. Active Component (AC) TDA units with personnel assigned/designated individual weapons will use weapon standards for Category II, TRC A. Reserve Component (RC) TDA units with personnel assigned/designated individual weapons will use weapon standards for Category II, TRC C. Personnel assigned/designated pistols and revolvers in AC and RC TDA units will use weapon standards for TRC A and C, respectively.

b. Exemptions. Personnel in TDA units who are in positions that are not assigned individual weapons are exempt from weapon qualification in accordance with AR 350-41, paragraph 3-4*e*(1)(*d*).

Table 5–5
Cross reference table.

Weapon System: BFV M2
TRC A: 85% primary crews must have qualified BT VIII A/B within the last 6 months
75% of rifle platoons must have qualified XII within the last 6 months.
Special Requirement: N/A
TRC B: 85% Primary crews must have qualified BT VIII within the last 6 months
TRC C: 50% of assigned BFV must qualify on BT VIII A/B every other year
TRC D: Live fire BT VI to VIII with past 36 months
Paragraph References: 5-5*a*
Table References: 5-6, 5-7, 5-8, 5-9, 5-10

Weapon System: CFV M3
TRC A: 85% of crews will qualify BT VIII A/B two times per year.
BT X A/B twice/ year; 85% ACR/Divisional Cav will qualify
Special Requirement: N/A
TRC B: Crews will conduct BT VIII A/B once year; 66% Scouts will qualify
BT V twice per training year
TRC C: 50% crew BT VIII A/B every other year.
Section EXEVAL once every two years.
TRC D: 19D participate in phase training as outlined in paragraph 5-5*b*(4).
Paragraph References: 5-5*b*
Table References: 5-11, 5-12, 5-13, 5-14, 5-15

Weapon System: BSFV M2/M3
TRC A: 66% Primary crews must have qualified BT VIII A/B once a year.
66% of Stinger sections will qualify on BT XA once a year;
Special Requirement: N/A
TRC B: No TRC B units.
TRC C: Crews will conduct BT VIII every other year
Stinger sections will conduct BT XA after mobilization.
TRC D: No TRC D units
Paragraph References: 5-5*c*
Table References: 5-16, 5-17, 5-18

Weapon System: BFSV
TRC A: 50% of crews will qualify BT VIII A/B annually.
Special Requirement: N/A
TRC B: No TRC B units
TRC C: No TRC C units
TRC D: No TRC D units
Paragraph References: 5-5*d*
Table References: 5-19

Weapon System: TOW/HMMWV/ITV
TRC A: All 11H will verify tracking skills using TGT within past 4 months.
85% will have qualified on VIII within past 6 months.
All platoons must have qualified XII within past 6 months.
Special Requirement: N/A
TRC B: All 11H will verify tracking skills using TGT within past 8 months.
75% will have qualified on VIII within past training year.
All platoons must have qualified XII within past training year.
TRC C: All assigned 11H will successfully conduct instructional exercises through TOW V A/B.
All crews will participate in situational training 2 times a year.
TRC D: 80% must receive a 'GO' within past 24 months on familiarization skills using the TGT and FIT or M70.
Paragraph References: 5-6*a*
Table References: 5-20

Weapon System: Dragon
TRC A: 90% of gunners and assistants will have scored 16 of 20 hits (80%) in both standing and sitting positions using LET within the past 3 months.
Infantry squad Dragon gunner will have live fired within last 3 months.
All Dragon gunners will have participated in Company or higher LFX within past 6 months.
Special Requirement: N/A.
TRC B: 75% will have verified tracking skills using DGT within past training year.
All Dragon gunners will have participated in LFX within past training year.

Table 5–5
Cross reference table. —Continued

All Dragon gunners will have participated in platoon EXEVAL within past training year.
TRC C: 60% of all gunners will qualify during the training year.
TRC D: 80% of instructors will have verified tracking skills using PGTS within past 12 months.
80% of Drill Sergeants will have verified tracking skills within past 24 months.
Paragraph References: 5-6*b*
Table References: 5-21

Weapon System: Javelin
TRC A: 90% of assigned gunners/assistants verified gunnery by scoring 75% on BST sustainment Javelin exercise within the past three months
Gunners assigned to Infantry squad or larger must have participated in LFX in last three months.
All gunners participate in Platoon EXEVAL within six months
All gunners receive GO on all gunners skill tests within six months
Special Requirement: N/A
TRC B: 75% gunners verified lock-on and tracking with BST within past training year.
Gunners assigned to Infantry squad or larger must have participated in LFX in past training year
All gunners must have participated in Platoon EXEVAL within past training year
All gunners must have received GO on all gunners skill tests within the past training year
TRC C: 60% will qualify during training year
Gunners participate in FTX and STX during training year
TRC D: 80% of assigned Javelin committee instructors verified lock-on and tracking with BST within past 12 months
80% of DS involved in training verified lock-on and tracking with BST within past 24 months
Paragraph References: 5-6*c*
Table References: 5-22

Weapon System: AT-4 (Category I)
TRC A: Must successfully engage 9 of 14 targets (Table III & IV) within the last 6 months using 9-mm tracer:
–3 soldiers per rifle squad
–2 per scout squad
Each designated gunner will have participated in LFX within past 3 months.
All gunners will have participated in Platoon EXEVAL as part of Company or higher FTX within past 6 months.
Special Requirement: N/A.
TRC B: Must have successfully engaged 9 of 14 targets (Table III & IV) within the last training year using 9-mm tracer:
– 2 soldiers per rifle squad
–2 soldiers per scout squad
Each designated gunner will have participated in LFX within past training year.
TRC C: Must have successfully completed Table I - III within the past training year:
–2 soldiers per rifle squad
–2 soldiers per scout squad
Each designated gunner will have participated in FTX/STX and EXEVAL within past training year.
TRC D: No TRC D units.
Paragraph References: 5-6*d*
Table References: 5-23

Weapon System: AT-4 (Category II).
TRC A: 10% of SGT and below must have qualified by successfully engaging 6 of 8 targets with the 9-mm tracer trainer within the past 12 months.
Special Requirement: N/A.
TRC B: 10% of SGT and below must have qualified by successfully engaging 6 of 8 targets with the 9-mm tracer trainer within the past 2 training years.
TRC C: No training requirements.
TRC D: 80% of instructors will have fired 9-mm Tracer trainer within past 12 months.
80% of Drill Sergeants will have fired 9-mm Tracer trainer within past 24 months.
Paragraph References: 5-6*e*

Table 5–5
Cross reference table. —Continued

Table References: 5-24

Weapon System: Mortars (60-mm, 81-mm, 107-mm and 120-mm)
TRC A: 90% squad leaders/ gunners/assistant gunners will have attained 70% in each event of mortar gunner's exam in past 6 months.
90% of all leaders (section/squad) and FDC will have passed the FDC exam within past 6 months.
All section/platoons will have completed external evaluation as part of FTX within past 6 months.
Special Requirement: N/A.
TRC B: 90% squad leaders/ gunners/asst. gunners will have passed mortar gunner's exam in past training year.
90% of all leaders (section/ squad) and FDC will have passed the FDC exam within past training year.
All section/ platoons will have completed external evaluation as part of FTX within past training year.
TRC C: 80% squad leaders/gunners/ asst. gunners will have passed mortar gunner's exam within past training year.
80% of all leaders (section/ squad) and FDC will have passed the FDC exam within past training year.
All sections will have completed external evaluation as part of FTX using SRTR within past training year.
TRC D: 80% of instructors and 11C Drill Sergeants will have passed mortar gunner's exam, the FDC exam and fired one live round within past 12 months.
Paragraph References: 5-7
Table References: 5-25, 5-26, 5-27, 5-28

Weapon System: Machine Gun M60/M240B (Category I)
TRC A: 90% of assigned MG/AG will have qualified:
–Machine gunners within past 6 months.
–Assistant Machine gunners within last year
Each gunner will have participated in LFX within past 3 months.
Platoon EXEVAL within past 6 months.
Special Requirement: N/A.
TRC B: 80% of assigned MG/AG will have qualified:
–Machine gunners within past training year.
–Assistant Machine gunners within past 2 training years
Each gunner will have participated in LFX within past training year.
Platoon EXEVAL within past 2 training years.
TRC C: 80% of assigned MG/AG will have qualified:
–Machine gunners within past training year.
–Assistant Machine gunners every other training year.
TRC D: No TRC D units.
Paragraph References: 5-8*a*
Table References: 5-29

Weapon System: Machine Gun M60 /M240B(Category II)
TRC A: 90% of assigned MG/AG will have qualified:
–Machine gunners within past 12 months
–Assistant Machine gunners biennially.
Each gunner will have participated in LFX within past 3 months.
Special Requirement: N/A.
TRC B: 80% of machine gunners will have qualified within past training year and will have completed all record fire requirements within the past 2 training years.
Each gunner will have participated in LFX within past training year.
TRC C: 80% of assigned machine gunners will have qualified within past training year.
TRC D: 80% of instructors will have qualified on the record (10 meter) and transition courses within the past 12 months.
80% of instructors will have night record qualified within the past 24 months.
Paragraph References: 5-8*b*
Table References: 5-30

Weapon System: Machine Gun M2 HB (Category I)
TRC A: 90% of assigned will have qualified:
–Machine gunners within past 12 months.
–Assistant Machine gunners:
•Record fire (10 meter) within the past 12 months.
•Completed all record fire requirements within the past 24 months.
Each crew will have participated in:
–LFX within past 6 months.
–Platoon EXEVAL within past 12 months.

Table 5–5
Cross reference table. —Continued

Special Requirement: For Divisional Combat Engineer Units:
90% of assigned will have qualified:
–Machine gunners within past 12 months.
–Assistant Machine gunners:
•Record fire (10 meter) within the past 12 months.
•Completed all record fire requirements within the past 24 months.
TRC B: 80% of assigned will have qualified:
–Machine gunners within past training year.
–Assistant Machine gunners within past 2 training years
Each gunner will have participated in LFX within past training year.
Platoon EXEVAL within past 2 training years.
TRC C: 80% of assigned will have qualified:
–Machine gunners within past training year.
–Assistant Machine gunners every other training years
TRC D: No TRC D units.
Paragraph References: 5-8*c*
Table References: 5-32

Weapon System: Machine Gun M2 HB (Category II)
TRC A: 4 personnel will fire transition record course as instruction course annually
Special Requirement: No TRC 1A units
TRC B: One person will have fired the practice and record course (10 Meter) within the last training year.
TRC C: One person will have fired the practice and record course (10 Meter) within the last training year.
TRC D: 80% of instructors will have qualified on the record (10 meter) and transition courses within the past 12 months.
80% of Drill Sergeants will have completed instructional firing (transition) within past 12 months.
Paragraph References: 5-8*d*
Table References: 5-33

Weapon System: Grenade Machine Gun MK 19 (Category I)
TRC A: 90% of gunners will have met standards within past 6 months.
90% assistant gunners will have met standards within past 12 months.
Each gunner will have participated in:
–Squad LFX within past 3 months.
–Co or Bn FTX in past 6 months.
Special Requirement: For MP Units:
90% of gunners will have met standards within past 6 months.
90% assistant gunners will have met standards within past 12 months.
TRC B: 80% of gunners will have met standards within past training year.
80% assistant gunners will have met standards within past 2 years.
Each gunner will have participated in Squad LFX within past training year.
TRC C: 70% of gunners will have qualified on transition record course within the past training year.
TRC D: No TRC D units
Paragraph References: 5-8*e*
Table References: 5-34

Weapon System: Grenade Machine Gun MK 19 (Category II)
TRC A: 90% of gunners/assistant gunners will have met standards within past 12 months.
Special Requirement: N/A
TRC B: 80% of gunners will have confirmed zero/transition practice within the past training year.
Gunners and assistant gunners will have fired full qualification within the past 2 training years.
TRC C: 70% will have qualified on the transition practice course for instructional purpose within the past training year.
TRC D: 80% of instructors will have completed:
–Zero/ transition within last 12 months.
–Transition/ night within last 24 months.
80% of drill sergeants will have completed transition/night within the past 24 months.
Paragraph References: 5-8*f*
Table References: 5-35

Weapon System: M249 Automatic Rifle (Category I)
TRC A: 90% of gunners will have met standards within the past 6 months.
Each gunner will have participated in a LFX within the past 3 months.
Each assistant gunner will have participated in CO or BN FTX within the past 6 months.
Special Requirement: N/A
TRC B: 80% of gunners will have met standards within past training year.
Each gunner will have participated in Squad LFX within past training year.
Each gunner will have participated in platoon EXEVAL within the past 2 years.
TRC C: 70% of gunners will have qualified on transition record course within the past training year.
TRC D: No TRC D units5-8*g*5-36

Weapon System: M249 Automatic Rifle (Category II)
TRC A: 90% of gunners will have met standards within the past 6 months.
Special Requirement: N/A
TRC B: 80% of gunners will have met standards within past training year.
Each gunner will transition and night fire every 2 training years.
Need qualification from IS.
TRC C: 70% of gunners will have conducted instructional firing on 10M and transition courses within the past training year.
TRC D: 80% of instructors will have met:
–10M and transition standards within past 12 months.
–Night record within the last 24 months.
80% of drill sergeants will have completed instructional firing within the past 24 months.
Paragraph References: 5-8*h*
Table References: 5-37

Weapon System: H&K MP5 SMG 9-mm
TRC A: 90% of protective service agents within past 3 months.
Special Requirement: N/A.
TRC B: No TRC B units
TRC C: No TRC C units
TRC D: No TRC D units.
Paragraph References: 5-8*i*
Table References: 5-52

Weapon System: Rifle (Category 1) (M16A1/A2) Carbine (M4A1)
TRC A: 90% of soldiers will have met standards within the past 6 months.
Each rifle/scout squad will have participated in a LFX within the past 3 months.
All Infantry rifle platoons will have participated in Platoon EXEVAL as part of CO or Bn FTX within past 6 months.
Special Requirement: N/A
TRC B: 80% of soldiers will have met standards within the past training year.
Each rifle/scout squad will have participated in a LFX within the past training year.
All Infantry rifle platoons will have participated in Platoon EXEVAL within past 2 training years.
TRC C: 70% of soldiers will have qualified under NBC conditions and at night within the past training year.
Will have participated in a squad/platoon/company FTX/STX within past training year.
Will have participated in a squad/platoon/company EXEVAL within the past two training years.
TRC D: No TRC D units.
Paragraph References: 5-9*a*
Table References: 5-38

Weapon System: Rifle (Category II) (M16A1/A2) Carbine (M4A1)
TRC A: 90% of soldiers will have met annual standards within past 12 months
Platoons will have completed an EXEVAL within the past 12 months.
90% of SRT personnel will have met individual requirements within the past 12 months.
Special Requirement: N/A

Table 5–5
Cross reference table. —Continued

TRC B: 80% of soldiers will have verified zero, shoot the day practice and record course each training year.
NBC record course will be fired every two training years.
Soldiers will have participated in squad/ platoon/company FTX/STX.
TRC C: 80% of soldiers will verify zero, shoot the day practice and record course each training year.
NBC record course will be fired every two training years.
Soldiers will participate in squad/platoon/company FTX/STX.
TRC D: 80% of instructors and drill sergeants will:
–have met verify zero, shot the day practice and record course within the past 12 months.
–NBC record course and night record fire will be conducted biennially.
Paragraph References: 5-9*b*
Table References: 5-39

Weapon System: M21/M24 Sniper Rifle
TRC A: Includes TRC S (SRT).
Zero monthly
Qualification and night fire quarterly
Completed in external CO or Bn FTX within the past 12 months.
Special Requirement: N/A.
TRC B: All will:
–Zero with quarterly
–Fire qualification and night fire within the past 4 months.
–Participate in LFX within the past training year.
–Successfully completed ARTEP standards within the past training year.
TRC C: All will:
–Zero with quarterly
–Fire qualification and night fire within the past 4 months.
–Participate in LFX within the past training year.
–Successfully completed ARTEP standards within the past training year.
TRC D: No TRC D units.
Paragraph References: 5-9*c*
Table References: 5-40

Weapon System: M3A1 SMG
TRC A: 90% will have conducted instructional firing within the past 12 months.
Special Requirement: N/A.
TRC B: 80% will have conducted instructional firing within the past training year.
TRC C: 80% will have conducted instructional firing within the past training year.
TRC D: No TRC D units.
Paragraph References: 5-9*d*
Table References: 5-42

Weapon System: M203 Grenade Launcher (Category I, II)
TRC A: Must have met M16 requirements also.
90% will have met standards within the past 6 months.
Participated in squad/ platoon LFX within the past 3 months.
Category I will have completed as part of CO or Bn FTX within past 12 months.
Special Requirement: N/A.
TRC B: 80% will have met standards within the past training year.
Participated in squad/ platoon LFX within the past training year.
Category I will have completed as part of CO or Bn FTX within past 2 training years.
TRC C: 80% will have met standards within the past training year.
Participated in squad/ platoon LFX within the past training year.
Category I will have completed as part of CO or Bn FTX within past 2 training years.
TRC D: No TRC D units.
Paragraph References: 5-9*e*
Table References: 5-43

Weapon System: M203 Grenade Launcher (Category II)
TRC A: Includes TRC S (SRT).
90% will have met standards within the past 12 months.
TRC A units will have conducted l LFX within the past 12 months.
Special Requirement: N/A.
TRC B: 80% will have met standards within the past 2 training years.

Table 5–5
Cross reference table. —Continued

TRC C: 80% will have met standards within the past 2 training years.
TRC D: 80% instructors and Drill Sergeants will have met requirements within the past 24 months, and with MOPP 4 clothing within the past 24 months.
Paragraph References: 5-9*f*
Table References: 5-44

Weapon System: Pistols (M1911A1, M9, .38 Caliber Revolver)
TRC A: 90% of soldiers assigned a pistol will have met the standards within the past 12 months.
90% of MPs assigned a pistol will have met the standards within the past 12 months.
Each MP will fire the night sustainment within the past 12 months.
90% of SRT will have met the standard within the past 3 months.
90% of Special Agents will have met the standard within the past 3 months.
Agents will have fired the night course within the last 12 months.
Special Requirement: N/A.
TRC B: 80% of soldiers assigned a pistol will have met the standards within the past training year.
80% of MPs assigned a pistol will have met the standards within the past training year.
TRC C: 80% of soldiers assigned a pistol will have met the standards within the past training year.
80% of MPs assigned a pistol will have met the standards within the past training year.
TRC D: 80% of instructors and Drill Sergeants will have met requirements within the past 12 months.
Paragraph References: 5-9*g*(For CID, see 5-9*h* and *i*)
Table References: 5-45, 5-46

Weapon System: Hand Grenade (Category I)
TRC A: 90% will have thrown a live Fragmentation within the past 12 months.
90% will have negotiated a the grenade course within the past 6 months.
90% will have participated in squad/ platoon LFX within the past 3 months.
Special Requirement: N/A.
TRC B: 80% will have thrown a live grenade within the past 2 training years.
80% will have negotiated the grenade course within the past training year.
80% will have participated in squad/ platoon LFX within the past training year.
TRC C: 80% will have thrown a live grenade within the past 2 training years.
80% will have negotiated the grenade course within the past training year.
80% will have participated in squad/ platoon LFX within the past training year.
TRC D: No TRC D units.
Paragraph References: 5-9*j*
Table References: 5-47

Weapon System: Hand Grenade (Category II)
TRC A: 90% will have thrown a live Fragmentation within the past 24 months.
90% of Combat, CS and CSS will have negotiated a the grenade course within the past 12 months.
90% of SRT will have negotiated the grenade course within the past 3 months.
Special Requirement: N/A.
TRC B: Qualifying will occur post mobilization.
TRC C: Qualifying will occur post mobilization.
TRC D: Qualifying will occur post mobilization.
Paragraph References: 5-9*k*
Table References: 5-48

Weapon System: Claymore Mine (M18A1/A2) (Category I, II)
TRC A: 90% will have emplaced, armed and disarmed an inert mine within the past 3 months.
Each squad will have emplaced, armed and fired one live mine during a squad/platoon LFX within the past 3 months.
Special Requirement: N/A.

Table 5–5
Cross reference table. —Continued

TRC B: 80% will have emplaced, armed and disarmed an inert mine within the past 6 months.

Each squad will have emplaced, armed and fired one live mine during a squad/platoon LFX within the past training year.

TRC C: 80% will have emplaced, armed and disarmed an inert mine within the past 6 months.

Each squad will have emplaced, armed and fired one live mine during a squad/platoon LFX within the past training year.

TRC D: No TRC D units

Paragraph References: 5-9/

Table References: 5-49

Weapon System: Claymore Mine (M18A1/A2) (Category I ,II) (CS/CSS)

TRC A: o 90% will have emplaced, armed and disarmed an inert mine within the past 6 months.

Special Requirement: N/A.

TRC B: 80% will have emplaced, armed and disarmed an inert mine within the past training year.

TRC C: 80% will have emplaced, armed and disarmed an inert mine within the past training year.

TRC D: 80% of instructors will have emplaced, armed and disarmed an inert mine within the past 12 months.

Paragraph References: 5-9*m*

Table References: 5-50

Weapon System: M1200 Shotgun

TRC A: 90% will have met standard within the past 3 months.

Special Requirement: N/A.

TRC B: 80% will have met standard within the past training year.

Table 5–5
Cross reference table. —Continued

TRC C: 80% will have met standard within the past training year.

TRC D: 80% of instructors will have conducted instructional fire met standard within the past 12 months.

Paragraph References: 5-9*n*

Table References: 5-51

Weapon System: M82A1 Sniper Rifle

TRC A: 75% of Engineer personnel assigned will have qualified every 6 months.

Special Requirement: N/A.

TRC B: No TRC B units.

TRC C: No TRC C units.

TRC D: No TRC D units.

Paragraph References: 5-9*o*

Table References: 5-41

Weapon System: Fox Reconnaissance Vehicle -M240 MMG

TRC A: 80% of crews will qualify FT XI and XII every 12 months.

Special Requirement: N/A.

TRC B: No TRC B units.

TRC C: No TRC C units.

TRC D: No TRC D units.

Paragraph References: 5-9*p*

Table References: 5-31

Notes:
[1] Review actual verbiage in referenced chapter for accuracy.

Table 5–6
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle—(M2) per Mech Battalion (TRC A)

				Subcal		TOW Blast	5.56	7.62	Red	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	TOW[5]	M80	Tracer	Coax	Phos	Blank	Hoffman
PGT[1]	12		BGST[1]	2							
COFT[1]	12										
TGP	1										
Table V x 70 Crews	2			11200							
Zero x 58 Vehicles	4	3	2					50			
Subtotal #4		696	464					11600			
VI A/B x 70 Crews	2	32	24					350			14
Subtotal #5		4480	3360					49000			1960
VII A/B x 70 Crews	2	56	24					400			18
Subtotal #6		7840	3360					56000			2520
VIII A/B x 70 Crews	2	48	48					450			21
Subtotal #7		6720	6720					63000			2940
Dismounted LFX[3] x 12 Plt	2										
Subtotal #8											
XI A/B x 12 Platoons[3]	2	192	194			4	800	800			56
Subtotal #9		4608	4656			96	19200	19200			1344
XII x 12 Platoons[3]	2	192	194			4	800			68	
Subtotal #10		4608	4656			96		19200		1632	
CALFEX × 58 Crews[2]	1	24	24		1	2		200	16		12
Subtotal #11		1392	1392		58	116		11600	928		696
Co FTX x 58 Crews	2									400	
Subtotal #12										46400	
Bn FTX x 58 Crews	2									200	

Table 5–6
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle—(M2) per Mech Battalion (TRC A)—Continued

				Subcal		TOW Blast	5.56	7.62	Red	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	TOW[5]	M80	Tracer	Coax	Phos	Blank	Hoffman
Subtotal #13										23200	
Bn EXEVAL × 58 Crews	2									200	
Subtotal #14										23200	
Rds/Veh		523	424	386	1	5	331	3958	16	1600	191
Total Per Bn:		30344	24608	22400	58	308	19200	229600	928	92800	11092
DODIC		A940	A976	A146	PB96/94	L592	A072	A131	G978	A111	L602

Notes:

[1] Preliminary Gunnery Training (PGT) is conducted monthly. BGST is conducted prior to live fire density and COFT isrecommended at 4 hrs per crew every month.

[2] TOW Gunnery Program (TGP) is conducted at a minimum prior to TOW live fire in accordance with FM 23-1.

[3] XI, XII and dismounted LFX are resourced from STRAC requirements for M16 rifle, M60 MG, SAW, Dragon, and AT-4.

[4] Crew breakdown
12 = 4 platoon vehicles x 3
48 = 4 platoon vehicles x 12
58 = primary crews
70 = primary crews + 12 alternate platoon leader crews

[5] As missiles become available.

Table 5–7
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle (M2) per Mech Bn with PGS (TRC A)

			Subcal	TOW	Blast		5.56	Red	7.62		
Table	Freq	TPDS-T	TPT	7.62T	TOW[5]	M80	Tracer	Coax	Phos	Blank	Hoffman
PGT[1]	12										
BGST[1]	2										
COFT[1]	12										
TGP	1										
Table V x 70 Crews	2			11200							
Zero x 58 Vehicles	4	3	2					50			
Subtotal #4		696	464					11600			
VI A/B x 70 Crews	2	32	24					350			14
Subtotal #5		4480	3360					49000			1960
VII A/B x 70 Crews	2	56	24					400			18
Subtotal #6		7840	3360					56000			2520
VIII A/B x 70 Crews	2	48	48					450			21
Subtotal #7		6720	6720					63000			2940
Dismounted LFX[3] x 12 Plt	2										
Subtotal #8											
XI A/B x 12 Platoons[2]	2	192/ PGS	194/ PGS			4	800	400			56
Subtotal #9		2304	2328			48	9600	9600			672
XII x 12 Platoons[3]	2	192/ PGS	194/ PGS			4		800			34
Subtotal #10		2304	2328			48		9600			816
CALFEX x 58 Crews[2]	1	24	24		1	2		200	16		12
Subtotal #11		1392	1392		58	116		11600	928		696
Co FTX x 58 Crews	2									400	
Subtotal #12										46400	

Table 5–7
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle (M2) per Mech Bn with PGS (TRC A)—Continued

Table	Freq	TPDS-T	Subcal TPT	TOW 7.62T	Blast TOW[5]	M80	5.56 Tracer	Red Coax	7.62 Phos	Blank	Hoffman
Bn FTX x 58 Crews	2									200	
Subtotal #13										23200	
Bn EXEVAL x 58 Crews	2									200	
Subtotal #14										23200	
Rds/Veh		443	344	386	1	4	166	3627	16	1600	166
Total per Bn		25736	19952	22400	58	212	9600	210400	928	92800	9604
DODIC		A940	A976	A146	PB96/94	L592	A072	A131	G978	A111	L602

Notes:

[1] Preliminary Gunnery Training (PGT) is conducted monthly. BGST is conducted prior to live fire density and COFT isrecommended at 4 hrs per crew every month.

[2] TOW Gunnery Program (TGP) is conducted at a minimum prior to TOW live fire in accordance with FM 23-1.

[3] XI, XII and dismounted LFX are resourced from STRAC requirements for M16 rifle, M60 MG, SAW, Dragon, and AT-4.

[4] Crew breakdown
12 = 4 platoon vehicles x 3
48 = 4 platoon vehicles x 12
58 = primary crews
70 = primary crews + 12 alternate platoon leader crews

[5] As missiles become available.

Table 5–8
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle (M2) per Mech Battalion (TRC B)

Table	Freq	TPDS-T	TPT	Subcal 7.62 T	TOW TOW[4,5]	Blast M80	7.62 Coax	7.62 Blank	M21 Hoffman
PGT[1]	12								
BGST[1]	1								
COFT[1]	6								
TGP[2]	1								
V A/B x 70 Crews	1			160					
Subtotal #3				11200					
Zero x 58 Vehicles	2	3	2				50		
Subtotal #4		348	232				5800		
VI A/B x 70 Crews	1	32	24				350	14	
Subtotal #5		2240	1680				24500	980	
VII A/B x 70 Crews	1	56	24				400		18
Subtotal #6		3920	1680				28000		1260
VIII A/B x 70 Crews	1	48	48				450		21
Subtotal #7		3360	3360				31500		1470
EXEVAL x 12 Plt	1							400	
Subtotal #8									4800
Rds/Veh		170	120	193			1648	83	64
Total Per Battalion:[4]		9868	6952	11200	12	140	95600	4800	3710
DODIC		A940	A976	A146	PB96/94	L592	A131	A111	L602

Notes:

[1] Preliminary Gunnery Training (PGT) is conducted monthly. BGST is conducted prior to live fire density and COFT is recommended at 4 hrs per crew every month.

[2] TOW Gunnery Program (TGP) is conducted at a minimum prior to TOW live fire in accordance with FM 23-1.

[3] Crew breakdown
12 = 4 platoon vehicles x 3
48 = 4 platoon vehicles x 12
58 = primary crews
70 = primary crews + 12 alternate platoon leader crews

[4] Missile authorization is one per platoon per year.

[5] As missiles become available.

Table 5–9
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle (M2) per Mech Battalion (TRC C)

				Subcal	TOW Blast		7.62	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	TOW	M80	Coax	Blank	Hoffman
PGT[1]	12								
BGST[1]	1								
COFT[1]	6								
TGP[2]	1								
V A/B x 70 Crews	1			160					
Subtotal #4					11200				
Zero x 58 Vehicles	2	3	2				50		
Subtotal #5		348	232				5800		
VI A/B x 70 Crews	.5[4]	32	24				350		14
Subtotal #6		2240	1680				24500/0		980
VII A/B x 70 Crews	.5[4]	56	24				400		18
Subtotal #7		3920	1680				28000/0		1260
VIII A/B x 70 Crews	.5[4]	48	48				450	21	
Subtotal #8		3360	3360				31500/0	1470	
EXEVAL x 12 Plts	.5[4]							400	
Subtotal #9								4800	
Rds/Veh		170/6	120/4	193			1548/100	83	64/0
Total Per Battalion:		9868/348[5]	6952/232[5]	11200	0	0	89800/ 5800	4800	3710/0[5]
DODIC		A940	A976	A146	PB96/94	L592	A131	A111	L602

Notes:

[1] Preliminary Gunnery Training (PGT) is conducted monthly, BGST is conducted annually and COFT is recommended at 4 hrs. per crew every other month.

[2] TOW Gunnery Program (TGP) is conducted at a minimum prior to TOW Live Fire in accordance with FM 23-1.

[3] Crew breakdown
12 = 4 platoon vehicles x 3
48 = 4 platoon vehicles x 12
58 = primary crews
70 = primary crews + 12 alternate platoon leader crews

[4] Biennial event.

[5] Biennial event fired/Biennial event not fired.

Table 5–10
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle (M2)—USAR (TRC D)

				TOW Blast	7.62	7.62	M21
Table	Freq	TPDS-T	TPT	M80	Coax	Blank	Hoffman
BGST	1						
COFT[1]	2						
I-II[2] per Instructor	1			2			
Zero per Instructor	1	6	4		100		
Subtotal #1 per Instructor	1	6	4	2	100		
VI A/B per Instructor[3]		33	32	24	350		14
VII A/B per Instructor[3]		33	56	24	400		18
VIII A/B per Instructor[3]		33	48	48	450		21

Table 5–10
Annual Ammunition Requirements & Training Strategy for the Bradley Fighting Vehicle (M2)—USAR (TRC D)—Continued

				TOW Blast	7.62	7.62	M21
Table	Freq	TPDS-T	TPT	M80	Coax	Blank	Hoffman
Subtotal #2 per Instructor	.33	136	96			1200	
Total per Instructor Every 36 Months:		154	108	6	1300		53
DODIC		A940	A976	L592	A131	A111	L602

Notes:
[1] COFT frequency is recommended at 4 hrs. per crew every other month.
[2] Tables I-II are conducted annually.
[3] Tables VI-VIII are conducted once every 36 months.

Table 5–11
Annual Ammunition Requirements & Training Strategy for the Bradley Cavalry Fighting Vehicle (M3) (TRC A)

				Subcal	TOW Blast	7.62	Red	7.62	M21	
Table	Freq	TPDS-T	TPT	7.62T	TOW1	M80	Coax	Phos	Blank	Hoffman
PGT	12									
BGST	2									
COFT	12									
V	2			160						
Zero	4	3	2				50			
VI A/B	2	32	24			2	350			14
VII A/B	2	56	24		2	400			18	
VIII A/B	2	48	48		2	450			21	
TOW Qual	2									
IX A/B (Device Based)	4									
IX A/B	2	72	24				200			12
X A/B	2	72	24				200			15
CALFEX	1	24	24		1	2	200	16		12
Plt FTX	4					8			400	
Trp FTX	2				8			400		
Sqdn FTX/EXEVAL	3				4			200		
Trp FCX	2				1					
Sqdn FCX	1				1					
Totals per M3:		596	320	320	1	77	3600	16	3000	172
Totals per Plt:		3576	1920	1920	6	462	21600	96	18000	1032
Totals per ACR Sqdn:		23244	12480	12480	39	3003	140400	624	117000	6708
Totals per Div Sqdn:		23244	12480	12480	39	3003	140400	624	117000	6708
DODIC		A940	A976	A146	PB96/94	L592	A131	G978	A111	L602

Notes:
[1] As missiles become available.

Table 5–12
Annual Ammunition Requirements & Training Strategy for the Bradley Cavalry Fighting Vehicle (M3) with PGS (TRC A)

			Subcal		TOW Blast		7.62	Red	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	TOW[1]	M80	Coax	Phos	Blank	Hoffman
PGT	12									
BGST	2									
COFT	12									
V	2			160						
Zero	4	3	2				50			
VI A/B	2	32	24			2	350			14
VII A/B	2	56	24			2	400			18
VIII A/B	2	48	48			2	450			21
TOW Qual	2									
IX A/B (device based)	4									
IX A/B	2	72/ PGS	24/ PGS				200			12
X A/B	2	72/ PGS	24/ PGS				200			15
CALFEX	1	24	24		1	2	200	16		12
Plt FTX	4				8			400		
Trp FTX	2				8			400		
Sqdn FTX/EXEVAL	3				8			200		
Trp FCX	2				1					
Sqdn FCX	1				1					
Totals per M3:		452	272	320	1	77	3200	16	3000	155
Totals per Plt:		2712	1632	1920	6	462	19200	96	18000	930
Totals per ACR Sqdn:		17628	10608	12480	39	3003	124800	624	117000	6045
Totals per Div Sqdn:		17628	10608	12480	39	3003	124800	624	117000	6045
DODIC		A940	A976	A146	PB96/94	L592	A131	G978	A111	L602

Notes:
[1] As missiles become available.

Table 5–13
Annual Ammunition Requirements & Training Strategy for the Bradley Cavalry Fighting Vehicle (M3)(TRC B)

				Subcal		TOW Blast	7.62	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	TOW1	M80	Coax	Blank	Hoffman
PGT	12								
BGST	1								
COFT	6								
V A/B	1			160					
Zero	2	3	2				50		
VI A/B	1	32	24			2		20014	
VII A/B	1	56	24		2	200		18	
VIII A/B	1	48	48		2		200	21	
Plt FTX	1					8		400	
Trp FTX	1					8		400	

Table 5–13
Annual Ammunition Requirements & Training Strategy for the Bradley Cavalry Fighting Vehicle (M3)(TRC B)—Continued

				Subcal		TOW Blast	7.62	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	TOW1	M80	Coax	Blank	Hoffman
Trp FCX	1				1				
Totals per M3:		142	100	160	23	700	800	53	
Totals per Platoon:		852	600	960	1	138	4200	318	
Totals per Trp:		5396	3800	6080	3	874	26600	30400	2014
DODIC		A940	A976	A146	PB96/94	L592	A131	A111	L602

Notes:
[1] Missile authorization is one per platoon per year as missiles become available.

Table 5–14
Individual Ammunition Requirements & Training Strategy for Bradley Cavalry Fighting Vehicle (M3) TRC C

				Subcal	7.62	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	Coax	Blank	Hoffman
PGT	12						
BGST	1						
COFT	6						
V A/B	1				160		
Zero	2[1]	3/0[2]	2/0[2]	50			
VI A/B	.5[1]	32/0[2]	24/0[2]	200		14	
VII A/B	.5[1]	56/0[2]	24/0[2]	200		18	
VIII A/B	.5[1]	48/0[2]	40/0[2]	200		21	
TOW Qual	1						
Plt FTX	1					400	
Trp FTX	1					400	
Trp FCX	1						
Totals per M3:		142	100	160	700	800	53
Totals per Platoon:		852	600	960	4200	4800	318
Totals per Trp:		5396	3800	6080	26600	30400	2014
DODIC		A940	A976	A146	A131	A111	L602

Notes:
[1] Biennial Event.
[2] Biennial Event Fired/Not Fired.

Table 5–15
Individual Ammunition Requirements & Training Strategy for Bradley Cavalry Fighting Vehicle (M3) USAR (TRC D)

				TOW Blast	7.62	M21
Table	Freq	TPDS-T	TPT	M80	Coax	Hoffman
Phase I Reclass-RC POI	1					
Phase II 19D (D3) SOJT Scout Commander's Certification Course	1	35	35	2	200	
Level III Annual Sustainment Training BGST	1					
I-V	1					

Table 5–15
Individual Ammunition Requirements & Training Strategy for Bradley Cavalry Fighting Vehicle (M3) USAR (TRC D)—Continued

				TOW Blast	7.62	M21
Table	Freq	TPDS-T	TPT	M80	Coax	Hoffman
V	1					
Annual Total per TC:						
Triennial Sustainment Tng Zero	1	3	2	50		
VI	1	24	32	2	200	14
VII	1	68	49	2	200	18
Triennial total per TC:	123		84	4	450	32
DODIC		A940	A976	L592	A131	L602

Table 5–16
Annual Ammunition Requirements & Training Strategy for the Bradley Stinger Fighting Vehicle M-2 (TRC A)

				Subcal	7.62	Red	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	Coax	Phos	Blank	Hoffman
PGT[1]	4							
BGST[1]	2							
COFT[1]	12							
V A/B x 30 Crews	2			160				
Subtotal #3				9600				
Zero x 30 Crews	2	3	2					50
Subtotal #4		180	120		3000			
VI A/B x 30 Crews	1	32	24		350			14
Subtotal #5		960	720		10500			420
VII A/B x 30 Crews	1	56	24		400			18
Subtotal #6		1680	720		12000			540
VIII A/B x 30 Crews	1	48	48		450			21
Subtotal #7		1440	1440		13500			630
IX x 30 Crews	1		100		50			
Subtotal #8			3000		1500			
X x 30 Crews	1		100		50			
Subtotal #9			3000		1500			
Rnds/Veh:		142	300	9600	1400			53
Total Per Bn:		4260	9000	9600	42000			1590
DODIC		A940	A976	A146	A131			L602

Notes:
[1] Preliminary Gunnery Training (PGT) is conducted monthly. BGST is conducted prior to live fire density and COFT is recommended at 4 hrs per crew every other month.

Table 5–17
Annual Ammunition Requirements & Training Strategy for the Bradley Stinger Fighting Vehicle M-3 (TRC A)

				Subcal	7.62	Red	7.62	M21
Table	Freq	TPDS-T	TPT	7.62T	Coax	Phos	Blank	Hoffman
PGT[1]	4							
BGST[1]	2							
COFT[1]	12							
V A/B x 30 Crews	2			160				
Subtotal #3				9600				
Zero x 30 Crews	2	3	2					50
Subtotal #4		180	120		3000			
VI A/B x 30 Crews	1	32	24		350			14
Subtotal #5		960	720		10500			420
VII A/B x 30 Crews	1	56	24		400			18
Subtotal #6		1680	720		12000			540
VIII A/B x 30 Crews	1	48	48		450			21
Subtotal #7		1440	1440		13500			630
IX x 30 Crews	1		100		50			
Subtotal #8			3000		1500			
X x 30 Crews	1		100		50			
Subtotal #9			3000		1500			
Rnds/Veh:		142	300	9600	1400			53
Total Per Bn:		4260	9000	9600	42000			1590
DODIC		A940	A976	A146	A131			L602

Notes:
[1] Preliminary Gunnery Training (PGT) is conducted monthly. BGST is conducted prior to live fire density and COFT is recommended at 4 hrs per crew every other month.

Table 5–18
Annual Ammunition Requirements & Training Strategy for the Bradley Stinger Fighting Vehicle M-2/3 (TRC C)

Table	Freq	TPDS-T	TPT	Subcal 7.62T	7.62 Coax	M21 Hoffman
PGT[1]	2					
BGST[1]	1					
COFT[1]	6					
V A/B x 30 Crews	1			160		
Subtotal #3				4800		
Zero x 30 Crews	.5[2]	3	2		50	
Subtotal #4		90/0	60/0		1500/0	
VI A/B x 30 Crews	.5[2]	32	24		350	14
Subtotal #5		960/0	720/0		10500/0	420/0
VII A/B x 30 Crews	.5[2]	56	24		400	18
Subtotal #6		1680/0	720/0		12000/0	540/0
VIII A/B x 30 Crews	.5[2]	48	48		450	21
Subtotal #7		1440/0	1440/0		13500/0	630/0
Rnds/Veh:		139	98	160	1250	53
Total per Bn:		4170/0[3]	2940/0[3]	4800	37500/0[3]	1590/0[3]

Table 5–18
Annual Ammunition Requirements & Training Strategy for the Bradley Stinger Fighting Vehicle M-2/3 (TRC C)—Continued

Table	Freq	TPDS-T	TPT	Subcal 7.62T	7.62 Coax	M21 Hoffman
DODIC		A940	A976	A146	A131	L602

Notes:

[1] Preliminary Gunnery Tables (PGT) is conducted semi-annually. BGST is conducted prior to live fire density and COFT is recommended at 4 hrs per crew every other month.

[2] Biennial Event

[3] Biennial Event Fired/Not Fired.

Table 5–19
Annual Ammunition Requirements & Training Strategies for the Bradley Fire Support Vehicle M-2/3 (TRC A)

Table	Freq	TPDS-T	TPT	Subcal 7.62 T	7.62 Coax M21	Hoffman
PGT[1]	4					
BGST[1]	1					
COFT[1]	6	6				
Zero	1	3	2			
VI A/B	1	32	24		350	14
VII A/B	1	56	24		400	18
VIII A/B	1	48	48		450	21
Total per BFSV:		139	98	1250	1200	53
DODIC		A940	A976	A146	A131	L602

Notes:

[1] Preliminary Gunner Training (PGT) is conducted quarterly. BGST is conducted prior to live fire density and COFT is recommended at 4 hrs per crew every other month.

Table 5–20
TOW Ammunition/Training Strategy

	Rounds Per Event			Freq By TRC				
Event	M80	ATWESS	Red Phos	A	B	C	D	DODIC
Wpns Tng				12	4	1	1	
Gunner Sustainment[1]				12	4	1	1	
Gunner's Skill Test				4	1	1	1	
Table I[1,2]				4	2	1	1	
Table II				4	2	1	1	
Table III				4	2	1	1	
Table IV				4	2	1	1	
Table V A/B[3,4]	60			4	1	1	1	
Table VI A/B	60			4	1	1	0	
Table VII A/B	20			2	1	0	0	
Table VIII A/B	20			2	1	0	0	
Table IX A/B	12			2	1	0	0	
Table X A/B	12			2	1	0	0	
Table XI A/B	12			2	1	0	0	
Table XII A/B	12			2	1	0	0	
Sec/Sqd/Plt STX[5]	14			6	4	2	0	
Co/Plt FTX[6]		14	8	2	1	0	1	
Co/Plt EXEVAL[6]		14	8	2	1	1	0	

Table 5–20
TOW Ammunition/Training Strategy—Continued

	Rounds Per Event			Freq By TRC				
Event	M80	ATWESS	Red Phos	A	B	C	D	DODIC
CALFEX/MISSILE FIRE[7]			1	1	0	0		
Bn EXEVAL[6]		14	8	1	0	0	0	
Total rounds per system:								
M80 Blast Simulator				740	264	148	60[8]	L592
ATWESS Cartridge				70	28	14	14	L367
Tow Missile[7/11]				1/Sys	1/Plt	0	0	([10])
Smoke				40	16	8	8	G978

Notes:
[1] Conducted with TOW Gunnery Trainer, No Ammo Required.
[2] Tables I-II: All 11H, Tables III-IV: Gunner Only.
[3] Tables V-XII conducted with TOW Field Tactical Trainer (FTT). Ammo is M80 (L592).
[4] Tables V-VI completed by Squad/Section Leader, Gunner, and loader.
[5] STX conducted with FTT. Ammo is M80.
[6] Force-on-Force events conducted with TOW MILES. Ammo is ATWESS (L367).
[7] Missile Authorization is TRC A: 1 Per Sys, TRC B: 1 Per PLT.
[8] TRC D TOW instructors authorized 20 rds M80 each.
[9] When the M60 MG is used on the M901/ITV, use machine gun table 5-23 for ammunition requirements.
[10] TOW Missile DODIC: PB94/PB96/PV04. PB96 and PB94 are fired from ITV and Bradleys, PV04 is fired from HMMWV, AH-1 or ground mounted systems.
[11] As missiles become available.

Table 5–21
Dragon Ammunition/Training Strategy

	Rounds per Event		Freq By TRC				
Event	M80	ATWESS	A	B	C	D	DODIC
Weapon Training			12	6	2	2	
Gunnery Sustainment[1]			12	6	1	1	
Advance Tracking[2]	60			6	1	0	0
Verification Qualification[2]	40			4	2	1	1
Sqd/Plt/Co FTX/STX		6	8	1	1	0	
Bn FTX (TRC B Co FTX)		6	2	1	0	0	
EXEVAL (ARTEP)			6	2	1	0	0
Sqd/Plt LFX[3]			2	6	1	0	0
CALFEX/Live Missile[3]			1	0	0	0	
Total Rounds Per Gunner:							
M80			520	140	40	40	L592
ATWESS			84	20	6	0	L367
Live Missile[4/6]			1/Co	1/Bn	0	0	PL22/PL23

Notes:
[1] The Dragon Gunnery Trainer is used for Gunnery Sustainment.
[2] Advanced tracking and verification/qualification range portion conducted with DGN field tactical trainer. Ammo is M80.
[3] Dragon participates in SQD/PLT LFX and CALFEX using MILES and the laser target interface device.
[4] Live missile authorizations are: TRC A: 1 per company. TRC B: 1 per battalion.
[5] M64 is used with LET if Dragon FTT is unavailable.
[6] As missiles become available.

Table 5–22
Javelin Ammunition Training Strategy

	Freq By TRC				
Event	A	B	C	D	DODIC
Weapon Training	12	6	2	2	
Gunnery Sustainment[1]	12	6	1	1	
Advance Tracking[2]	6	1	0	0	
Verification Qualification[2]	4	2	1	1	
Sqd/Plt/Co FTX/STX	8	1	1	0	
Bn FTX (TRC B Co FTX)	2	1	0	0	
EXEVAL (ARTEP)	2	1	0	0	
Sqd/Plt LFX[3]	6	1	0	0	
CALFEX/Live Missile[3]	1	0	0	0	
Total Rounds per Gunner:	0	0	0	0	
Live Missile[4,5]	1/Co	1/Bn	0	0	

Notes:
[1] Javelin Basic Skills Trainer is used for Gunnery Sustainment.
[2] Advanced tracking and verification/qualification range portion conducted with Javelin field tactical trainer. No ammo is required.
[3] Javelin participates in SQD/PLT LFX and CALFEX using MILES and the laser target interface device.
[4] Live missile authorizations are: TRC A: 1 per company; TRC B: 1 per Battalion.
[5] As missiles become available.

Table 5–23
AT-4 (Category I) Ammunition/Training Strategy

	Rounds Per Event		Freq By TRC			
Event	9-mm	ATWESS	A	B	C	DODIC
Preliminary Marksmanship Training (APP A, FM 23-35)			6	4	2	
Table I	12		2	1	1	
Table II	12		2	1	1	
Table III (Qualification)	8		2	1	1	
Table IV (Night Qualification)	6		2	1	0	
Table V (Advance Fire)[1]	6		2	1	0	
Sqd/Plt/Co FTX/STX		6	4	1	1	
Bn FTX		6	2	0	0	
CALFEX	5		1	0	0	
Sqd/Plt LFX	5		6	1	0	
EXEVAL (ARTEP)		6	2	1	1	
Instructional Fire[2]			1	1	0	
Total Rounds Per Specified AT-4 Firer:						
9mm Tracer			88	44	32	A358
ATWESS			83	17	12	L367
Live Rocket			3/SQD	1/SQD	0/SQD	C995

Table 5–23
AT-4 (Category I) Ammunition/Training Strategy—Continued

	Rounds Per Event		Freq By TRC			
Event	9-mm	ATWESS	A	B	C	DODIC
Additional 9-mm Tracer Per Squad[3]			120	120	60	A358

Notes:
[1] Not required for qualification. Training event only.
[2] Heat cartridge authorized is: TRC A 3 per Inf Sqd; 2/SCT Sqd, TRC B 1/Sqd.
[3] 120 rds of 9-mm tracer ammunition is authorized to each squad for additional squad members to fire Tables I and V (FM 23-35)

Table 5–24
AT-4 (Category II) Ammunition/Training Strategy

	Rounds Per Event		Freq By TRC				
Event	9-mm	ATWESS	A	B	C	D	DODIC
Preliminary Marksmanship Training (APP A, FM 23-35)			4	4	2	4	
Table I	12		1	1	0	1	
Table II	12		1	1	0	1	
Table III (Qualification)	8		1	1	0	1	
Table IV (Night Qualification)[2]	6		1	0	0	0	
Table V (Advance Fire)	6		1	0	0	0	
Sqd/Plt/Co FTX		6	2	.5[1]	0	0	
EXEVAL (ARTEP)		6	1	0	0	0	
Instructional Fire[3]			0	0	0	1	
Total Rounds Per AT-4 Firer:							
9-mm Tracer		44		32	0	32	A358
ATWESS			18	6/0[5]	0	0	L367
Additional Rounds Per Battalion [4]							
CS/CSS 9-mm Tracer			1800	1080	0	0	A358

Notes:
[1] Biennial event.
[2] Not required for qualification. Training event only.
[3] Heat rocket authorization is: 1 per USAR Training Battalion TRC D.
[4] This ammunition is required per battalion for other soldiers to fire Tables I and V. This ammunition is in addition to the firing requirements outlined above for each designated firer.
[5] Biennial event fired/Biennial event not fired.

Table 5–25
60-mm Mortar Annual Ammunition/Training Strategy

	Rounds Per Event				Freq By TRC				
Event	HE	WP	Illum	SRTR	A	B	C	D	DODIC
Gunner's Exam/FDC Exam					2	1	1	1	
Crew Drill/FDC Tng					12	4	4	4	
Mortar Crew/Sec Tng				48[1]	4	2	1	1	
EXEVAL Tng (W/SRTR)		4	8	48[1]	1	0	1	0	
EXEVAL Tng (W/LIVE)[2]	48	4	8	0	1	1	0	0	
EXEVAL (ARTEP) LFX[2]	48	4	8	0	2	1	1	0	
CALFEX	18	2	3	0	1	0	0	0	
Total Rounds Per Gun:									

Table 5–25
60-mm Mortar Annual Ammunition/Training Strategy—Continued

	Rounds Per Event				Freq By TRC				
Event	HE	WP	Illum	SRTR	A	B	C	D	DODIC
HE					162	96	48	0[3]	B632/B642
WP					18	8	8	0	B630
Illum					35	16	16	0	B627
SRTR					16	7	7	4	B645
Refurb Kit					224	89	89	44	B653

Notes:

[1] B645 is refurbishable using a B653 kit. Recommend 15 refurbishment kits, B653 per each B645 (ready to fire) cartridge requested. The tool kit, (M880/M766) available at all stations, is required for recovery and refurbishment of M766 cartridge in accordance with TM 9-1315-252-12 & P.

[2] SRTR can be substituted for HE in this event.

[3] TRC D mortar committees will shoot 1 Live HE per individual per year.

Table 5–26
81mm Mortar Annual Ammunition/Training Strategy

	Rounds Per Event				Freq By TRC				
Event	HE	WP	Illum	SRTR	A	B	C	D	DODIC
Gunner's Exam/FDC Exam					2	1	1	1	
Crew Drill/FDC Tng					12	4	4	4	
Mortar Crew/Sec/Plt Tng	0	0	0	57[1]	4	2	1	1	
Mortar Crew/Sec/Plt Tng	0	7	6	46[1]	1	0	1	1	
Mortar Crew/Sec/Plt Tng	46	7	6	0	1	1	0	0	
EXEVAL (ARTEP) LFX	46	7	4	0	2	1	1	0	
CALFEX	29	2	5	0	1	0	0	0	
Total Rounds Per Gun:									
HE					167	92	46	0[2]	C256
WP					30	14	14	7	C276
Illum					25	10	10	6	C226
SRTR					31	13	12	12	C876
Refurb Kits					243	101	91	91	C045

Notes:

[1] C876 is refurbishable using a C045 kit. Recommend 9 refurbishment kits per each C876 (ready to fire) cartridge requested. Tool kit, (M880/M766) available at all installations, is required for recovery and refurbishment of the M880 cartridge in accordance with TM 9-1315-252-12&P.

[2] TRC D Mortar Committee will shoot 1 live HE per individual per year.

Table 5–27
107-mm Annual Ammunition/Training Strategy

	Rounds Per Event				Freq By TRC				
Event	HE	WP	Illum	SRTR	A	B	C	D	DODIC
Gunner's Exam/FDC Exam					2	1	1	1	
Crew Drill/FDC Tng					12	4	4	4	
Mortar Crew/Sec/Plt Tng w/60-mm insert device		62	2	45	1	1	1	1	
Mortar Crew/Sec/Plt Tng	45[1]	6[2]	4		1	1	0	0	
EXEVAL (ARTEP) LFX	45[1]	6[2]	4		2	1	1	0	
CALFEX	11	2[2]	6		1	0	0	0	
Total Rounds Per Gun:									

Table 5–27
107-mm Annual Ammunition/Training Strategy—Continued

	Rounds Per Event				Freq By TRC				
Event	HE	WP	Illum	SRTR	A	B	C	D	DODIC
107-mm HE					146	90	45	0	C697[4]
107mm WP[2]					20	12	6	0	C708
60-mm WP[2]					6	6	6	6	B630
60-mm Illum					2	2	2	2	B627
107-mm Illum					18	8	4	0	C706
60-mm SRTR					3	3	3	0	B645
Refurb Kits					42	42	42	0	B653

Notes:

[1] SRTR may be substituted for HE, scenario dependent. B645 is refurbishable using a B653 kit. Recommend 16 refurbishment kits, B653 for each B645 (ready to fire) cartridge requested. Tool kit (M880/M766) available in accordance with TM 9-1315-252-12 & P.

[2] 60-mm WP rounds, using the 60-mm sleeve device, may be substituted. 107-mm WP is restricted.

[3] TRC D Mortar Committees will shoot 1 live HE per individual per year.

[4] One N335 Fuze required for each C697 HE round.

Table 5–28
120mm Mortar Annual Ammunition/Training Strategy

	Rounds Per Event					Freq By TRC				
Event	HE	WP	Illum[3]	SRTR	FRTR	A	B	C	D	DODIC
Gunner's Exam/FDC Exam						2	1	1	1	
Crew Drill/FDC Tng						12	4	4	4	
Crew/Sec/Plt Tng w/81-mm insert device				53[1]		4	2	1	1	
EXEVAL Tng w/81-mm insert device	31	10	3	31[1]		1	1	1	1[2]	
EXEVAL Tng (120-mm)		10	3		31[4]	1	1	0	0	
EXEVAL (ARTEP) LFX w/81-mm insert device	31	10	3			1	1	1	0	
EXEVAL LFX (120-mm)		10	3		31[4]	1	1	0	0	
CALFEX	11	2	6			1	0	0	0	
Total Service Rounds Per Gun:										
120-mm HE						11	0	0	0[2]	C623/C788[5]
120-mm WP						22	20	0	0	C624
120-mm Illum[3]						12[3]	6[3]	0	0	
81-mm HE						62	62	62	31	C256
81-mm WP						20	20	20	10	C276
81-mm Illum						18	12	6	3	C226
SRTR						27	15	9	9	C876
FRTR						62	62	0	0	CXXX
Refurbish Kits[1]						243	135	81	81	C045

Notes:

[1] Training using 81-mm insert device will be conducted with 81-mm ammunition (C256, C276, C226, and with the C876 SRTR. The C876 is refurbishable using a C045 kit. Recommend 9 refurbishment kits per each C876 (ready to fire) cartridge requested. Tool kit (M880/M766) available at all installations is required for recovery and refurbishment of the C876 cartridge in accordance with TM 9-1315-252-12 & P.

[2] TRC D Mortar Committees will shoot 1 live HE per individual per year.

[3] All illumination training will be conducted using 300 Series 81-mm (C226) illumination ammunition. No 120-mm illumination rounds will be procured for training.

[4] M931 FRTR substituted for 120-mm HE.

[5] C788 used for towed version.

Table 5–29
M60/M240B MG (Category I) Ammunition/Training Strategy

		Freq By TRC			
Event	Rounds Per Event	A	B	C	DODIC
Preliminary Marksmanship Training	EST	4	4	2	
10-Meter Zero/Practice	117 Ball	2	1	1	
10-Meter Record	119 Ball	2	1	1	
Transition Zero/Practice	182 Mix	2	1	0	
Transition Record	154 Mix	2	1	0	
Night Zero/Practice/Record	196 Mix	2	1	0	
Assistant Gunner (AG) 10 M	236 Ball	1	.5[1]	.5[1]	
AG Transition/Night	532 Mix	1	.5[1]	0	
Sqd/Plt LFX	300 Mix	6[2]	1	0	
CALFEX	200 Mix	1	0	0	
Sqd/Plt/Co FTX/STX	400 Blank	4[2]	1	1	
Bn FTX	400 Blank	2	0	0	
EXEVAL (ARTEP)	400 Blank	2	1	.5	
DRF Prep Fire[3]	40 Mix				
Total Rounds Per Machine gun:					‘
Ball		708	472/236[4]	472/236[4]	A143
Mix		3596	1364/832[4]	0	A131
Blank		3200	800	400/600	A111

Notes:
[1] Biennial event.
[2] Predetermined fire should be integrated in collective training.
[3] DRF preparatory fire: 40 Mix, requests are based on frequency of alert status.
[4] Biennial event fired/Biennial event not fired.

Table 5–30
M60/M240B MG (Category II) Ammunition/Training Strategy

		Freq By TRC				
Event	Rounds Per Event	A	B	C	D	DODIC
Preliminary Marksmanship Training		4	4	2	4	
10 Meter Zero/Practice	117 Ball	1	1	1	1	
10 Meter Record	119 Ball	1	1	1	1	
Transition Zero/Practice	182 Mix	1	.5[1]	0	1	
Transition Record	154 Mix	1	.5[1]	0	.5[1]	
Night Zero/Practice/Record	196 Mix	1	0[2]	0	.5[1]	
Assistant Gunner (AG) 10M	236 Ball	1	02	0	0	
AG Transition/Night	532 Mix	.5[1]	02	0	0	
Co/Plt FTX	200 Blank	1	.51	0	0	
EXEVAL (ARTEP)	200 Blank	1	0[2]	0	0	
DRF Prep Fire[3]	40 Mix					
Total Rounds Per Machine gun:						
Ball		472	236	236	236	A143
Mix		1064/532[4]	336/0[4]	0	532/182[4]	A131

Table 5–30
M60/M240B MG (Category II) Ammunition/Training Strategy—Continued

		Freq By TRC				
Event	Rounds Per Event	A	B	C	D	DODIC
Blank		400	200/0[4]	0	0	A111

Notes:
[1] Biennial event.
[2] Post mobilization event.
[3] DRF preparatory fire: 40 Mix, requests are based on the frequency of alert status.
[4] Biennial event fired/Biennial event not fired.

Table 5–31
M240 (FOX) (Category II) Ammunition/Training Strategy

Event	Rounds Per Event	Freq	DODIC
Preliminary Marksmanship Training		4	
Transition Zero/Practice	182 Mix	2	
Transition Record	154 Mix	2	
XI[1]	210 Mix	1	
XII[1]	285 Mix	1	
STX	200 Blank	4	
EXEVAL (ARTEP)	200 Blank	1	
Total Rounds Per Machine gun			
Ball		0	A143
Mix		1167	A131
Blank		1000	A111

Notes:
[1] XI and XII are resourced from STRAC requirements for the M16 rifle and AT-4.

Table 5–32
M2 .50 Cal MG (Category I) Ammunition/Training Strategy

		Freq By TRC				
Event	Rounds Per Event	A	(EN)	B	C	DODIC
Preliminary Marksmanship Training		4		4	2	
Gunner's Exam		2		1	1	
10 Meter Zero	12 Ball	2	2	1	1	
10 Meter Record	119 Ball[1]	2	2	1	1	
Transition Zero/Practice[3]	50 Mix	2	2	.5[2]	0[6]	
Transition Record[3]	154 Mix	2	2	.5[2]	.5[2]	
Night Zero/Practice/Record	182 Mix	1	0[6]	.5[2]	0[6]	
Asst Gunner Instructional Fire	54 Mix	1	1	.5[2]	.5[2]	
Sqd/Plt LFX	100 Mix	4	06	0	0	
CALFEX	100 Mix	1	0	0	0	
Sqd/Plt/Co FTX/STX	100 Blank	2	0	1	0	
Bn FTX (TRC C Co FTX)	100 Blank	1	1	0	0	
EXEVAL (ARTEP)	100 Blank	1	0	0	0	
DRF Prep Fire[4]	50 Mix					
Total Rounds Per Machine gun:						

Table 5–32
M2 .50 Cal MG (Category I) Ammunition/Training Strategy—Continued

		Freq By TRC				
Event	Rounds Per Event	A	(EN)	B	C	DODIC
Ball		262	262	131	131	A555
Mix		1244	562	540/0	154	A557
Blank		400	100	100	0	A598

Notes:
[1] For this event .50 SRTA, DODIC A602, SR 4/1, may be substituted for .50 Cal service ammunition. The M3 recoil amplifier is required when using SRTA, DODIC A602.
[2] Biennial event.
[3] These exercises may be fired from the tripod or vehicular mount.
[4] DRF preparatory fire: 50 Mix request based on the frequency of alert status.
[5] Biennial event fired/Biennial event not fired.
[6] All events with "0" will be fired post mobilization.

Table 5–33
M2 .50 Cal MG (Category II) Ammunition/Training Strategy

		Freq By TRC			
Event	Rounds Per Event	A	B	C	DODIC
Preliminary Marksmanship Training		4	4	2	
Gunner's Exam		4	1	1	
10 Meter Zero	12 Ball[2]	0	1	1	
10 Meter Record	119 Ball[2]	0	1	1	
Transition Zero/Practice	50 Mix	1	0[1]	0[1]	
Transition Record	154 Mix	3	0[1]	0[1]	
Night Zero/Practice/Record	182 Mix	0	0[1]	0[1]	
Assistant Gunner (AG) 10M	119 Mix	0	0[1]	0[1]	
Sqd/Plt/Co LFX		0	0[1]	0[1]	
Co FTX	100 Blank	1	.5[4]	0[1]	
EXEVAL (ARTEP)	100 Blank	0	0[1]	0[1]	
DRF Prep Fire[3]	50 Mix				
Total Rounds Per Machine gun:					
Ball		0	131	131	A555
Mix		358	0	0	A557
Blank		100	100/0[5]	0	A598

Notes:
[1] All events with "0" will be fired post mobilization (TRC C)/deployment (TRC A).
[2] For this event .50 Cal (DODIC: A602, SR4/1) may be substituted for .50 Cal service ammunition. The M3 recoil amplifier is required when using SRTA.
[3] DRF Preparatory fire: 50 Mix request based on Freq of alert status.
[4] Biennial Event.
[5] Biennial Event fired/Biennial Event not fired.

Table 5–34
MK19 MG (Category I) Ammunition/Training Strategy

			Freq By TRC				
Event		Rounds Per Event	A[7]	(MP)	B	C	DODIC
Preliminary Marksmanship Training			4	4	2	2	
Gunnery Skills Test		10 Dummy Rounds	4	4	4	2	
Zero/Transition Practice[2,3]	Table 1	30 TP	2	2	1	1	
Transition Record[2]	Table 5	42 TP	2	2	1	1	

Table 5–34
MK19 MG (Category I) Ammunition/Training Strategy—Continued

			Freq By TRC				
Event		Rounds Per Event	A[7]	(MP)	B	C	DODIC
Night Record[2]	Table 7	22 TP	2	2	1	0	
Assistant Gunner (AG) Qualification	Table 1[5]	68 TP	1	1	5[1]	0	
Sqd/Plt LFX C-8/9/10		30 TP	4	0	1	0	
EXEVAL (ARTEP)			1	0	1	0	
CALFEX C-8/9/10		24 TP	1	0	0	0	
DRF Prep fire[4]		5 TP					
Total Rounds Per Weapon:							
Dummy Rounds			10	10	10	10	B472[8]
TP			400	256	192/118[6]	72	B584

Notes:
[1] Biennial event.
[2] Commanders determine if tripod or vehicle mounted.
[3] HE round may be substituted for TP rounds for HE familiarization. If HE rounds are used they must be fired into a dedicated, fenced impact area due to danger from duds.
[4] DRF Preparatory fire: 5 TP, request is based on Freq of alert status.
[5] Assistant Gunner only fires transition practice/record using a zeroed MK 19.
[6] Biennial event fired/Biennial event not fired.
[7] This category includes: Infantry Platoons, AT Platoons, Mechanized Scout Platoons, MP Platoons, and D Company.
[8] Reorder as required

Table 5–35
MK 19 MG (Category II) Ammunition/Training Strategy

			Freq By TRC			
Event		Rounds Per Event	A	B	C	DODIC
Preliminary Marksmanship Training			4	4	2	
Gunnery Skills Test		10 Dummy Rounds	4	4	2	
Zero/Transition Practice[2]	Table 1	30 TP	1	1	1	
Transition Record[2]	Table 5	42 TP	1	.5[1]	0	
Night Record[2]	Table 7	22 TP	.5[1]	.5[1]	0	
Assistant Gunner (AG)	Table 1[5]	26 TP	.5[1]	.5[1]	0	
EXEVAL (ARTEP)			1	0	0	
DRF Prep fire[4]		5 TP				
Total Rounds Per Weapon:						
Dummy Rounds			10	10	10	B472[7]
TP			120/72[6]	120/30[6]	30	B584

Notes:
[1] Biennial event.
[2] Commanders determine if tripod or vehicle mounted.
[3] HE round may be substituted for TP rounds for HE familiarization. If HE rounds are used they must be fired into a dedicated, fenced impact area due to danger from duds.
[4] DRF Preparatory fire: 5 TP, request is based on frequency of alert status.
[5] Assistant Gunner only fires transition practice record using a zeroed MK 19.
[6] Biennial event fired/Biennial event not fired.
[7] Reorder as required

Table 5–36
M249 AR (Category I) Ammunition/Training Strategy

		Freq By TRC			
Event	Rounds Per Event	A	B	C	DODIC
Preliminary Marksmanship Training	EST	4	4	4	
10 Meter Zero/Practice	57 Ball	2	1	1	
10 Meter Record	51 Ball	2	1	1	
Transition Zero/Practice	78 Mix	2	1	1	
Transition Record	66 Mix	2	1	1	
Night Zero/Practice/Record	90 Mix	2	1	1	
Fire and Move LFX	70 Mix	4	1	1	
Sqd/Plt LFX	300 Mix	6	1	1	
CALFEX	200 Mix	1	0	0	
Sqd/Plt/Co FTX/STX	200 Blank	4	2	1	
Bn FTX	300 Blank	2	0	0	
EXEVAL (ARTEP)	300 Blank	2	1	.5	
DRF Preparatory Fire[2]	40 Mix				
Total Rounds Per Weapon:					
Ball		216	108	108	A062
Mix		2748	604	604	A064
Blank		2000	700	500/200[3]	A075

Notes:
[1] Biennial event.
[2] DRF Preparatory Fire: 40 Mix request based on frequency of alert status.
[3] Biennial event fired/Biennial event not fired.

Table 5–37
M249 AR (Category II) Ammunition/Training Strategy

		Freq By TRC				
Event	Rounds Per Event	A	B	C	D	DODIC
Preliminary Marksmanship Training	EST	4	4	2	4	
10 Meter Zero/Practice	57 Ball	1	1	1	1	
10 Meter Record	51 Ball	1	1	0	1	
Transition Zero/Practice	78 Mix	1	.5[1]	1	1	
Transition Record	66 Mix	1	.5[1]	0	0	
Night Zero/Practice/Record	90 Mix	1	.5[1]	0	.5[1]	
Plt/Co FTX/STX	300 Blank	1	.5[1]	0	.5[1]	
EXEVAL (ARTEP)	300 Blank	.5	0	0	0	
DRF Preparatory Fire[2]	40 Mix					
Total Rounds Per Weapon:						
Ball		108	108	57	108	A062
Mix		234	234/0[3]	78/0[3]	168/78[3]	A064

Table 5–37
M249 AR (Category II) Ammunition/Training Strategy—Continued

		Freq By TRC				
Event	Rounds Per Event	A	B	C	D	DODIC
Blank		600/ 300[3]	300/0[3]	0	300/0[3]	A075

Notes:

[1] Biennial event.

[2] DRF Preparatory Fire: 40 Mix request based on frequency of alert status.

[3] Biennial event fired/Biennial event not fired.

Table 5–38
M16A1/A2 Rifle/M4 Carbine (Category I) Ammunition/Training Strategy

		Freq By TRC			
Event	Rounds Per Event	A	B	C	DODIC
Preliminary Marksmanship Training	EST/Wpneer/MAC	4	4	4	
Zero[2]	18 Ball	2/3[6]	1	1	
Practice Fire[2]	40 Ball	2/3[6]	1	1	
Record Fire[2]	40 Ball	2/3[6]	1	1	
NBC Practice[2]	20 Ball	2	1	1	
NBC Record[2]	20 Ball	2	1	1	
Night Practice[3]	20 Ball/10 Tracer	2	1	1	
Night Record[3]	20 Ball/10 Tracer	2	1	1	
NVS Zero	18 Ball	2	0	0	
Advanced Skills	100 Ball	2	0	0	
Fire and Move LFX	16 Ball/4 Tracer	4	1	1	
Sqd/Plt LFX	130 Ball/20 Tracer	6	1	1	
CALFEX	120 Ball/10 Tracer	1	0	0	
Sqd/Plt/Co FTX/STX	120 Blank	4	2	1	
Bn FTX	120 Blank	2	0	0	
EXEVAL (ARTEP)	120 Blank	2	1	.5[1]	
DRF Prep Fire[4]	18 Ball				
Total Rounds Per Rifle:					
Ball		1556/1654	324	324	A071/A059
Tracer		186	44	44	A068/A063
Blank		960	360	120/240[5]	A080

Notes:

[1] Biennial event.

[2] For these events 5.56 SRTA for 5.56 service ammunition if required to fire on alternative course. The M2 bolt assembly is required when using the SRTA and the M261 Rim Fire Adapter (RFA) is required when using .22 Cal ammunition. Reference FM 23-9, JUL 89. These substitutes will only be used when service caliber firing is not feasible based on resources available and unit METL. Can be used on 25 meter indoor/outdoor range.

[3] Night fire, use 20 Ball and 10 Tracer rounds for firing night fire to standard (FM 23-9).

[4] DRF Preparatory FIRE: 18 Ball to confirm zero. Requests are based on frequency of alert status.

[5] Biennial events fired/Biennial events not fired.

[6] Soldiers equipped with the Close Combat Optic (CCO) qualify two times with CCO and one time with iron sights.

Table 5–39
M16A1/A2 Rifle M4 Carbine (Category II) Ammunition/Training Strategy

		Freq By TRC					
Event	Rounds Per Event	A	S	B	C	D	DODIC
Preliminary Marksmanship Training	EST/Wpneer/MAC	4	4	4	4	4	
Zero[2]	18 Ball	1	2	1	1	1	
Practice Fire[2]	40 Ball	1	2	1	1	1	
Record Fire[2]	40 Ball	1	2	1	1	1	
NBC Practice[2]	20 Ball	1	1	.5	0	.5[1]	
NBC Record[2]	20 Ball	1	1	.5	0	.5[1]	
Night Practice[3]	20 Ball/10 Tracer	1	1	.5	0	.5[1]	
Night Record[3]	20 Ball/10 Tracer	1	1	.5	0	.5[1]	
Plt/Co FTX/STX	40 Blank	2	1	.5	.5	0	
EXEVAL (ARTEP)	40 Blank	1	0	0	0	0	
DRF Prep Fire[4]	18 Ball						
Total Rounds Per Rifle:							
Ball		178	276	178/985	98	178/98[5]	A071/A059
Tracer		20	20	20/0[5]	0	20/0[5]	A068/A063
Blank		120	40	40/0[5]	40	0	A080

Notes:

[1] Biennial event.

[2] For these events 5.56 SRTA or .22 Cal ammunition may be substituted as appropriate and applicable for 5.56 service ammunition. The M2 bolt assembly is required when using the SRTA and the M261 Rim Fire Adapter (RFA) is required when using .22 Cal ammunition. (See FM 23-9.) These substitutes will only be used when service caliber firing is not feasible based on resources available and unit METL. Can be used on 25 meter indoor/outdoor range.

[3] Night fire, use 20 Ball and 10 Tracer rounds for firing night fire to standard (FM 23-9).

[4] DRF Preparatory FIRE: 18 Ball to confirm zero. Requests are based on frequency of alert status.

[5] Biennial events fired/Biennial events not fired.

Table 5–40
M21/24 Sniper Rifle (Category I) Ammunition/Training Strategy

		Freq By TRC				
Event	Rounds Per Event	A	S	B	C	DODIC
PMI		12	12	4	4	
Zero/Sustainment[1]	27 Ball	12	12	4	2	
Qualification[2,3]	60 Ball	4	4	4	2	
Night Fire	15 Ball	4	4	4	2	
LFX	10 Ball	6	0	1	0	
CALFEX	10 Ball	1	0	0	0	
STX	10 Blank	12	15	4	2	
Bn FTX	10 Blank	2	0	0	0	
EXEVAL	10 Blank	1	0	1	1	
Total Rounds Per Sniper:						
Ball		694	624	418	204	A136/A171
Blank		150	150	50	30	A112

Notes:

[1] Sniper team uses either iron sight or scope or both.

[2] Sniper and observer fire all individual tables.

[3] Special Reaction Teams: Marksmen and Observer will qualify in accordance with AR 190-58.

Table 5–41
M82A1 Sniper Rifle (Category II) Ammunition/Training Strategy

Event	Rounds Per Event	Freq	DODIC
PMI		4	
Zero/Familiarization	40 Ball	2	
Qualification	20 Ball	2	
Total Rounds Per Sniper:	120 Bal		A525/531

Table 5–42
M3A1 SMG Ammunition/Training Strategy

		Freq By TRC			
Event	Rounds Per Event	A	B	C	DODIC
Preliminary Marksmanship Training	4	4	4		
Instructional Fire	20 Ball	1	1	1	
Total Rounds Per Crewman:					
Ball	20	20	20	A475	

Table 5–43
M203 GL (Category I) Ammunition/Training Strategy

		Freq By TRC			
Event	Rounds By Event	A	B	C	DODIC
Preliminary Marksmanship Training		4	4	4	
Night Record Fire	3 HE	2	1	1	
Zero[1]	6 TP	2	1	1	
Qualification[2]	12 TP	2	1	1	
Sqd/Plt LFX	18 TP/5 WSP	6	1	1	
CALFEX	12 TP	1	0	0	
DRF Prep Fire[3]	6 TP				
Total Rounds Per Weapon:					
HE		6	3	3	B546
TP		156	36	36	B519
WSP		30	5	5	B535

Notes:
[1] Zero Quadrant Sight using 3 TP rounds, Zero Leaf Sight using 3 TP rounds, then quality in accordance with FM 23-31.
[2] TP will not be substituted for HE during night qualification.
[3] DRF Prep Fire: 6 TP: Request based on frequency of alert status.

Table 5–44
M203 GL (Category II) Ammunition/Training Strategy

		Freq By TRC					
Event	Rounds Per Event	A	S	B	C	D	DODIC
Preliminary Marksmanship Training		4	4	4	2	4	
Night Record Fire	3 HE	1	1	1	0	0	
Zero[2]	6 TP	1	1	1	1	1	
Qualification[3]	12 TP	1	1	.5[1]	0	.5[1]	

Table 5–44
M203 GL (Category II) Ammunition/Training Strategy—Continued

		Freq By TRC					
Event	Rounds Per Event	A	S	B	C	D	DODIC
LFX	4 TP	1	0	0	0	0	
DRF Prep Fire[4]	6 TP						
Total Rounds Per Weapon:							
HE		3	3	3	0	0	B546
TP		22	18	18/12[5]	6	18/12[5]	B519

Notes:
[1] Biennial Event
[2] Zero Quadrant Sight using 3 TP rounds, Zero Leaf Sight using 3 TP Rounds, then qualify in accordance with FM 23-31.
[3] TP will not be substituted for HE during night qualification.
[4] DRF Prep Fire: 6 TP: Request based on frequency of alert status.
[5] Biennial Event fired / Biennial Event not fired.

Table 5–45
Pistol Ammunition/Training Strategy

		Freq By TRC			
Event	Rounds Per Event	A	B	C	D
Preliminary Marksmanship Training		1	1	1	1
Instructional Fire	25 Ball	2	1	1	1
Combat Pistol Qualification course[1]	40 Ball	1	1	1	1
DRF Prep Fire[2]	7 Ball				
Total Rounds Per Firer:					
Ball[3]		90	65	65	65

Notes:
[1] Soldiers will fire Tables I-V, APP A, FM 23-35.
[2] DRF/RRF Preparatory Fire: 7 Ball, requests are based on frequency of alert status.
[3] DODIC: .38 Cal - A400; 9-mm - A363; .45 Cal - A475.

Table 5–46
MP/CID/SRT Pistol Ammunition/Training Strategy

		Freq By TRC				
Event	Rounds Per Event	A	S	B	C	D
Preliminary Marksmanship Training[1]		4	8	4	4	1
Instructional Fire	10 Ball	0	4[3]	0	0	0
Combat Pistol Qualification Course/Inst. Fire[2]	50 Ball	1	0	0	0	0
MP Firearms[4], Qualification Course/Inst. Fire[2]	60 Ball	1	4	1	1	1
MP Night Firearms Sustainment Course	20 Ball	1	4	1	1	.5[8]
NBC Record Fire	20 Ball	1	1	0	0	0

Table 5–46
MP/CID/SRT Pistol Ammunition/Training Strategy—Continued

Event	Rounds Per Event	Freq By TRC A	S	B	C	D	
Total Rounds Per Pistol: Ball DODIC: .38 Cal—A400; 9-mm—A363; .45 Cal.—A475		150/160[5]	380	80	80	80/60[9]	CID[6,7] 348

Notes:

[1] Preliminary marksmanship conducted using SDSSTD.

[2] Instructional firing is conducted during qualification firing. It is not a separate firing event.

[3] SRTs will instructional fire during each quarterly qualification in accordance with AR 190-58. The four additional instructional fires will be used between qualifications.

[4] Military police will qualify once on the MP Firearms Qualification Course if available. If not available, qualification will be on the Combat Pistol Qualification Course.

[5] If TRC A units qualify twice on the MPFQC then 160 rounds are resourced.

[6] CID agents will qualify quarterly—72 rounds per quarter.

[7] CID agents night sustainment—60 rounds yearly.

[8] Biennial Event

[9] Biennial Event fired/not fired

Table 5–47
Hand Grenade (Category I) Ammunition/Training Strategy

Event	Ammunition Per Soldier M228	M67	Freq by TRC A	B	C	DODIC
Qualification	10	0	2	1	1	
Live Grenade Throw	0	1	1	.5[1]	0	
Sqd/Plt LFX	8/Sqd	0	6	1	0	
Total Per Soldier:						
M228[2]			20	10	10	G878
M67			1	1/0[3]	0	G881
Total Per Squad:						
M228			48	8	0	

Notes:

[1] Biennial Event

[2] When ordering the M228 Practice Fuze, order the body practice hand grenade, DODIC G811, to conduct training.

[3] Biennial Event fired / Biennial Event not fired.

Table 5–48
Hand Grenade (Category II) Ammunition/Training Strategy

Event	Ammunition Per Soldier M228	M67	Freq By TRC A	S	B	C	D	DODIC
Qualification	10	0	1	4	0[2]	0[2]	0[2]	
Live Grenade Throw	0	1	.5[1]	0	0[2]	0[2]	0[2]	
Total Per Soldier:								
M228[3]			10	40	0	0	0	G878
M67			1/0[5]	0	0	0	0	G881
Additional M228 (G878) Per SRT Team[4]			108[2]					

Notes:

[1] Biennial Event

[2] Post Mobilization Event

[3] When ordering M228 Practice Fuze, order body practice hand grenade, DODIC G811, to conduct training.

[4] In addition to qualification, SRT teams are authorized additional M228 (G878) to conduct monthly FTX's. One M228 (G878) is authorized per member 12 times a year. Calculations are based on 9 member SRT team.

[5] Biennial Events fired / Biennial Events not fired.

Table 5–49
M18A1/A2 Mine (Category I) Ammunition/Training Strategy

		Freq By TRC		
Event	Mines Per Event	A	B	C
Employment Instruction/Qualification	INERT	4	2	2
Sqd/Plt/Co FTX/STX	INERT	4	1	1
Bn FTX	INERT	2	0	0
EXEVAL (ARTEP)	INERT	1	.5[1]	0
Sqd/Plt LFX	1 M18A1/A2 Per Sqd	6	1	0
Total M18A1/A2 Claymore Mines Per Squad:				
M18A1/A2 Claymore Mine[2]		6	1	0

Notes:
[1] Biennial Event
[2] K143 is the primary DODIC for the live Claymore mine. If K145 is substituted for K143, units must order the accessories: M57 firing device, M40 Test Set, M4 Electric Blasting Cap, and M7 Bandoleer. K139 is inert Claymore mine.

Table 5–50
M18A1/A2 Mine (Category II) Ammunition/Training Strategy

		Freq By TRC			
Event	Mines Per Event	A	B	C	D
Employment Instruction/ Qualification	INERT	2	1	1	1
Co/Plt FTX	INERT	2	1	1	0
Evaluation (ARTEP)	INERT	0	0	0	0
Live Fire Qualification	1 M18A1/A2 Per Plt	1	0[1]	0[1]	0[1]
Total M18A1/A2 Claymore Mines Per Plt:					
M18A1/A2 Claymore Mine[2]		1	0	0	0

Notes:
[1] Post-mobilization Event.
[2] K145 is substituted for K143 then units must order the accessories: M57 firing device, M40 Test Set, M4 Electric Blasting cap, and M7 Bandoleer. K139 is inert Claymore mine.

Table 5–51
Shotgun Ammunition/Training Strategy

		Freq By TRC					
Event	Rounds Per Event	A	S	B	C	D	DODIC
Instructional Fire	3	1	8	1	1	1	
Qualification Fire	10	1	4	1	1	1	
Total Rounds Per Firer:							
Buckshot		13	64	13	13	13	A011

Table 5–52
H & K MP5 SMG 9-mm

Event	Rounds Per Event	Freq	DODIC
Qualification	50	4	
Total Rounds Per Firer:			
Ball	200		A363

Notes:
[1] CID Special Agents assigned to the protective services unit will qualify in accordance with CIDR 195-19.

Chapter 6
Engineer Weapon Systems

Section 1
Introduction

6–1. Standards, strategies, and requirements

a. This chapter provides training standards, strategies and resource requirements to conduct training with Engineer systems, mines and demolitions. The training programs provided have been tied directly to SM and MTP tasks at the different TRC levels. Each program contains a training standard and strategy that outlines the training sequence, including frequencies for live-fire, subcaliber fire and use of device. Table 6-1 is an index of weapons and weapon systems for which training programs have been written and approved. This table provides cross reference entries to the standard and strategy for each specific weapon or weapon system.

b. The objective is to assist field commanders in attaining and sustaining individual and unit proficiency on Engineer systems, mines and demolitions.

c. The standards and strategies for Engineer weapon systems are based on tasks found in MTPs, SMs and TC 5-117. The specifics of each exercise will not be presented here; the appropriate manuals must be consulted.

(1) Demolition tasks.

(a) Individual.

1. Construct a Modernized Demolition Initiator (MDI)/Detonating Assembly.

2. Prime Explosives Non-Electrically.

3. Prime Explosives with Detonating Cord.

(b) MTP.

1. Disable Organic Bridge.

2. Create a Crater Obstacle with Explosives.

3. Disable an LOC/Airfield.

4. Disable Bridge with Explosives.

5. Construct an Abatis.

6. Breach Minefield Using Explosives.

7. Breach Obstacles (Other than Minefields).

8. Breach Obstacles (Wire Obstacles).

(2) Mine warfare tasks.

(a) Individual.

1. Install/Remove the M16A1 Antipersonnel Mine (Korea only).

2. Install/Remove the M15 Antitank Mine.

3. Install/Remove the M19 Antitank Mine.

4. Install/Remove the M21 Antitank Mine.

5. Install/Remove U.S. Anti-Handling Devices.

(b) MTP.

1. Install and Recover or Transfer a Hasty Protective Minefield.

2. Emplace a Tactical (Standard Pattern) Minefield.

3. Emplace a Tactical (Row) Minefield.

4. Conduct an in-Stride Breach of a Minefield.

5. Emplace a Tactical (Scatterable) Minefield.

d. Current DA policy for live mine training is as follows:

(1) Training will be allowed with M15, M19, and M21 mines (M16 Korea only).

(2) M16 training is restricted to units assigned to Korea only (see paragraph 6-8).

(3) All approved mines will be armed and disarmed, no more than 25 iterations per mine.

(4) No trip wires or booby traps will be used.

(5) Using tilt rods with live mines is prohibited.

(6) Training with the M16-series antipersonnel mine will be done with the positive safety pin remaining in the M605 fuse.

(7) No pre-1957 M605 fuzes will be allowed in training with the M16 antipersonnel mine.

(8) Live-mine training and simulator training will not take place concurrently at the same location, to preclude a live mine being mistaken for an inert mine.

e. Commanders must conduct a risk assessment that supports the unit METL.

f. M16AP mine arming/disarming (use) is restricted to those units assigned to Eighth U.S. Army, Korea. No units at other locations are authorized to train with AP mines. A Presidential Decision Directive (PDD 48) on antipersonnel land-mine policy was signed on 26 June 1996. This policy restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

6–2. Training devices

a. General. Historically, the Army has relied on extensive use of actual equipment and full caliber ammunition to train individuals, crews, and platoons. However, the escalating cost of ammunition coupled with the fact that many critical tasks may be trained as effectively using devices and simulators has shifted emphasis to a combination of full caliber ammunition, subcaliber ammunition, devices and simulators appropriately integrated into the training strategies. The CATS reflects critical gates, or levels, of prerequisite training required prior to reaching a level of qualification or mission accomplishment.

b. Objective. Training devices aid sustainment training in garrison and local training areas. Devices enhance and sustain skills and, in some cases, may be the only available method of training critical tasks to standard.

c. Device List. The following devices may be used to execute individual and unit training strategies. For some systems, similar devices may be interchanged to accomplish the same training objectives.

(1) *Combat engineer vehicle (CEV).*

(a) The laser tank gunnery trainer, M55, is available from TSC for CEV training. It is installed in the coax machine gun position and used with a snake board to train gunner hand-eye coordination.

(b) The CEV VIGS is a real time, interactive, part-task training system capable of presenting a wide range of engagement scenarios, along with accurate visual, audible and tactical cues simulating live engagement. This device is available from TSC (product number DVC 17-50, NSN 6920-01-242-1689).

(c) The 40-mm subcaliber device M970 consists of a 165-mm dummy round with a tube insert that fires a 40-mm projectile that approximates the trajectory and accuracy of the full caliber 165-mm round. In addition to developing gunner skills, this device enables loaders to practice installation and removal of full size and weight rounds into the ready rack and tubular storage rack, as well as loading and firing to specified time limits.

(d) The Walentine device consists of a .45 caliber submachine gun barrel and tracer ammunition. It has interim approval for use in lieu of the 40-mm subcaliber device. It is accurate at ranges of 100 to 300 meters. TRADOC has forwarded the specifications and engineering drawings to all TSCs (product number, DVC 99-31).

(2) *Mines.*

(a) The M88 is a device that trains the Volcano operators on the DCU-BIT and on a total systems check. This device meets individual and unit training requirements by allowing the crew to fire live canisters with inert mines and make minefield adjustments in dispersion.

(b) The M89 is a non-firing training device for the Volcano system. The M89 trains the operator on the total Volcano system. The M89 is a programmable sensing device for fault isolation and identification. The M89 serves as the filler canister between the M88 canisters on the four corners.

(c) The placed training mine (PTM) kit, with antihandling devices, will satisfy the inert portion of both the individual and unit training standard. The PTM kit consists of one each: M14AP, M15AT, M16AP, M18A1AP, M19AT, M21AT mines and antihandling devices; it is a TSC item (product number, DVC-T 05-41). No training is required with the M14AP mine.

(d) The wide area mine (WAM) (Hornet) M98 is a training device used to accomplish the inert strategy. No live WAM firing is required at this time.

(e) There are several training devices that may be used to satisfy mine training standards in lieu of placed training mine kits. The

training devices given at table 6-1 are available to conduct sustainment and unit training with antitank mines. Some of these devices simulate the actual mechanical functioning of the service mine, while others are replicas or have smoke producing capabilities.

Table 6–1
Antitank Mine Training Devices

Product title: Firing Device Demo M-1 (Inert) **Product number:** DODIC M633 (Class V)
Product title: Firing Device Demo M-1 Pull (Inert) **Product number:** DODIC M 635 (Class V)
Product title: Firing Device Demo M-3 Pull Release (Inert) **Product number:** DODIC M637 (Class V)
Product title: Firing Device, M-5 Pressure Release (Inert) **Product number:** DODIC M639 (Class V)
Product title: Firing Device Demo M-1 Pressure (Inert) **Product number:** DODIC M641 (Class V)
Product title: Smoke Producing M21 AT Mine **Product number:** DVC-T23-31 (TSC)
Product title: M21 AT Mine (Inert) **Product number:** DVC-T23-33 (TSC)
Product title: AT Mine (Inert) for M15 AT Mine **Product number:** M20 (Class V)
Product title: AT Mine (Inert) for M19 AT Mine **Product number:** M80 (Class V)
Product title: Activator, AT Mine, Practice, M1 **Product number:** DODIC K002 (Class V)
Product title: Primer Ignitor F/Mine Antipersonnel M8 **Product number:** DODIC K030 (Class V)
Product title: Ignitor Assembly F/Mine Antipersonnel Practice M8 **Product number:** DODIC K031 (Class V)
Product title: Charge Spotting F/Mine Antipersonnel Practice M8 **Product number:** DODIC K040 (Class V)
Product title: AT Mine, Practice, Heavy **Product number:** DODIC K231 (Class V)
Product title: Simulator Antipersonnel Mine Projectile Practice M8 **Product number:** DODIC K270 (Class V)
Product title: Cap Antipersonnel F/Mine Practice M8 **Product number:** DODIC K271 (Class V)
Product title: Cap Antipersonnel F/Mine Practice M8 **Product number:** DODIC K280 (Class V)
Product title: Wide Area Mine Individual Training M98 **Product number:** TBD

(f) The training devices given at table 6-2 are available to conduct sustainment and unit training with antipersonnel mines. These devices simulate the actual mechanical functioning of service mines.

Table 6–2
Antipersonnel Mine Training Devices

Product title: M16A1 Antipersonnel Mine (Inert) **Product number:** DVC-T 23-34 (TSC)
Product title: M14 Antipersonnel Mine (Dummy) **Product number:** DVC-T 23-38 (TSC)
Product title: Smoke Producing M16A1 Antipersonnel Mine **Product number:** DVC-T 23-32 (TSC)
Product title: Mine Antipersonnel M8 Practice **Product number:** DODIC K139 (Class V)

(3) Demolitions. The training devices given at table 6-3 will be used with the primary demolition devices, i.e., C-4, to construct and install simulated electrical, non-electrical and detonating cord firing systems.

Table 6–3
Demolition Training Devices

Product type: Product title: Detonating Cord (Dummy) Reinforced **Product number:** N/A
Product type: Igniter Time Blasting Fuse, Practice **Product number:** DODIC M767 (Class V)
Product type: Portable Remote-Ctr Demo Firing Control **Product number:** DVC 21-03 (TSC)
Product type: Charge Demo Block 1 lb. (Inert, TNT) **Product number:** NSN 1375-00-621-8371
Product type: Bangalore torpedo **Product number:** DVC-D5-43
Product type: Charge Demo Block (Inert, C-4) **Product number:** NSN 1375-00-908-6362

(4) *Munitions.* The inert selectable lightweight attack munition (SLAM M99 is used to accomplish the inert strategy. No live SLAM firing is required at this time. Units in a post mobilization/ pre-deployment training status must fire a live SLAM at a ratio prescribed in tables 6-14, 6-15, 6-18, and 6-19.

Note. The product type is selectable lightweight attack munition—XM99. The product number is TBD.

6–3. Sample munitions requirements

a. General. Requirements are provided below for one iteration of mine and demolition tasks.

Note. C-4 calculations are based on 1-1/4-pound blocks.

b. Individual demolition tasks.

(1) Construct a non-electric initiating detonating assembly and prime explosives non-electrically:

(a) One 1-1/4 block C-4 M023.
(b) One ignitor MN08.
(c) One M-11 ML47.

(2) Prime explosives with detonating cord.

(a) One 1/4-pound block of C-4 M023.
(b) One fuse ignitor MN08.
(c) One M-14 MN06.
(d) Twelve foot detonating cord

(3) Install and remove the M16A1 antipersonnel mine: M16A1 AP mine or PTM kit (Korea only).

(4) Install and remove the M15 antitank mine: M15 AT mine or PTM kit.

(5) Install and remove the M19 antitank mine: M19 AT mine or PTM kit.

(6) Install and remove the M21 antitank mine: M21 AT mine or PTM kit.

(7) Install and remove the anti-handling devices: PTM kit.

c. Squad tasks.

(1) Install and recover or transfer a hasty protective minefield: PTM kit or dummy inert mines.

(2) Create a crater obstacle with explosives (three-hole hasty crater, dual primed).

(a) Three shaped charges (15 or 40 lb) M420.
(b) Three cratering charges M039.
(c) Twenty-four blocks of C-4 (30 lb) M023.
(d) Two hundred feet detonating cord M456.
(e) Two M81 ignitors MN08.
(f) One M14 MN06.
(g) One M13 MN03.
(h) One M12 MN02.
(i) Six M11 ML47.

(3) Breach obstacles with explosives:

(a) 100 blocks of C-4 M023.
(b) 100 ignitors M81.
(c) 60 J hooks.
(d) 500-f00t detonation cord M456.
(e) 60 M11 shock tube (30 ft).
(f) One M12 shock tube (500 ft).
(g) One Time delay (20 minutes) MXX.

(4) Disable bridge with explosives. (No live demolitions are required to train this task.)

(5) Breach obstacles other than minefields:
(a) Three charges of 10 lb of C-4.
(b) Three each M11, ML47.
(c) One each M12, MN02.
(d) One each M14, MN06.
(e) One each M13, MN03.
(f) Two each M81, ignitor.
(g) Detonation cord, M456 (200 ft).

(6) Construct an abatis (six trees at 24" using $P=D^2/50$; seven packages of C-4 per tree (dual primed)).
(a) 49 blocks of C-4 (52.5 lb).
(b) Two M14 MN06.
(c) Two M81 ignitors MN08.
(d) Six M-11 ML47.
(e) Detonation cord, M456 (60 ft).

(7) Conduct an in-stride breach of a minefield: dummy inert mines (No live demolitions are required to train this task.)

(8) Breach obstacles:
(a) Sixteen blocks of C-4 (30 lb).
(b) One M14 MN06.
(c) One M81 ignitor MN08.
(d) Two M11 ML47.

(9) Breach obstacles (wire obstacles). (Ammunition requirements for this task allow for initiation and detonation of 5 each, two section Bangalore torpedoes.)
(a) One Bangalore torpedo kit.
(b) Five M11 ML47.
(c) One M14 MN06.
(d) One M81 ignitor MN08.

d. Platoon tasks.

(1) Emplace (using the inert Hornet) a tactical minefield: inert mines.

(2) Emplace a tactical (row) minefield: inert mines.

(3) Emplace a tactical (scatterable) minefield.
(a) M136 MOPMS.
(b) Flipper with M79 training mines.
(c) Volcano with M88/M89 training mine canisters.

(4) Disable an LOC/airfield: No live demolitions are required to train this task.

Section II
Training Programs

6–4. Development

a. Training programs have been developed for each STRAC category as found in table 6-4 and table 6-5. The standards are supported by training strategies that, if followed, will enable the commander to attain and sustain the weapon proficiency of his soldiers. Inert training to standard is required prior to live-fire training. Resources are applied to the training standards and strategies as written. The commander may modify both the training strategy and use of resources, as long as the training standards are met.

b. The quantities of munitions required by task for one iteration of the SM and MTP tasks in the training programs are summarized in paragraph 6-3.

c. This chapter does not identify training strategies or resources for "operational" use of demolitions. "Operational" in this sense means the day-to-day, base operations requirement for demolitions normally associated with EOD units, and quarry sections. All other units are addressed in this chapter.

6–5. Modernized demolition initiator.

a. Modernized demolition initiator (MDI). A new non-electric initiator replacing the Army's conventional systems (electric and non-electric).

(1) MDI will be phased in starting in FY 96. New equipment training teams are scheduled starting in 3Q 96.

(2) MDI is faster to employ and affords a better way to control the firing of demolition targets. This will improve the commander's ability to counter the threat's movements, reduce the manpower required to employ, and initiate demolition missions rapidly. The MDI initiating system will introduce new techniques that reduce the time spent on targets and reduce the number of soldiers required to accomplish the mission. MDI is safer than current demolition initiators to transport, employ, and ignite.

(3) MDI will be used in accordance with FM 5-250.

b. Characteristics, description and functions of the MDI.

(1) Holder: blasting cap and shock tube, M9, DODIC ML45.

(2) Cap, blasting: non-electric 30-foot shock tube, M11, DODIC ML47

(3) Cap, blasting: non-electric 500-foot shock tube, M12, DODIC MN02

(4) Cap, blasting: non-electric 1000-ft shock tube, M13, DODIC MN03

(5) Cap, blasting: non-electric, delay, M14, DODIC MN06

(6) Cap, blasting: non-electric, delay, M15 (optional 200 or 25 msec), DODIC MN07

(7) Ignitor, time blasting fuse: M81, DODIC MN08 with shock tube capability.

c. A cap blasting, non-electric delay, with extended time delay (estimated 20 minutes) and a cap blasting, non-electric, with a 10-foot shock tube will be type classified in the future.

d. General description. Modernized demolition initiators is the project name given to a new family of non-electric blasting caps and associated items introduced in 1996 to replace the M7 non-electric blasting cap and the M6 electric blasting cap. The snap-together MDI components will allow simplification of initiation systems and of some types of explosive priming. Complete replacement of electrical initiation systems will result in nil requirement for blasting machines and associated demolition equipment. MDI will also improve reliability and safety. One reason for this reliability is that all components are sealed and, unlike standard non-electric priming components, cannot be easily degraded by moisture.

(1) *Shock tube.* A thin plastic tube of extruded polymer with a layer of special explosive material deposited on its interior surface. This special explosive dust propagates a detonation wave, which is normally contained within the plastic tubing, along the shock tube to a factory crimped and sealed blasting cap (and thus moisture resistant). The shock tube must be cut, enabling insertion into the M81 ignitor. After cutting, shock tubes are susceptible to moisture. The shock tube offers the instantaneous action of electric initiation without the risk of accidental initiation of the blasting cap (and the charge) by radio transmitters in the area, or by static electricity discharge. The shock tube medium is extremely reliable.

WARNING
Although the detonation along the shock tube is normally contained within the plastic tubing, burns may occur if the shock tube is held.

(2) *Blasting caps.* Each shock tube blasting cap is a factory crimped and sealed unit that is resistant to moisture (unlike standard non-electric blasting caps) and extremely reliable.

(a) The high strength MDI blasting caps are the M11, M14, and M15. All are non-electric types and two (M11 and M15) come with a length of shock tube attached. The M14 consists of military strength and size non-electric blasting cap, factory crimped to a length of M700 time blasting fuse (factory-calibrated for a minimum five-minute delay).

(b) The two new low strength MDI blasting caps are the M12 and M13. These relay-type blasting caps come with factory-attached lengths of shock tube (500 feet for the M12 and 1000 feet for the

M13). The detonators of the relay-type caps are purposely made larger than standard military blasting caps (and the high strength MDI blasting caps) so they will *not* fit in standard capwells. All of the low strength shock tube blasting caps come with a special plastic clamp attached to the detonator to facilitate quick and easy attachment to the shock tube of another blasting cap or to detonating cord.

(3) *Blasting cap holder, M9.* A plastic blasting cap holder will allow connection of several shock tubes to a high strength M11 or M14 blasting cap. The M9 Holder facilitates secure connection of up to five shock tubes to the high strength detonation of an M11 or M14 blasting cap. The M9 holder can also be used to connect the M11 or M14 blasting cap to detonating cord.

(4) *Time blasting fuse ignitor, M81.* A new more powerful ignitor will initiate the shock tube ends of the new blasting caps. The M81 is almost identical to the older M60 ignitor, except the M81 has the screw end cap and shipping plug colored black and accommodates either the thin shock tube or standard diameter time blasting fuse, M700. The M60 ignitor will not physically secure the shock tube nor reliably initiate it. Non-electric blasting cap M11 may be used to prime all standard military explosives (including detonating cord) or to initiate shock tube of other MDI blasting caps. The M11 is a high strength blasting cap factory crimped to a 30-foot length of shock tube. The M11 functions by transmitting an initiating shock or small detonation through its shock tube into its blasting cap.

6–6. Purpose and objectives of the training programs

Training programs provide a method for the attainment and sustainment of weapon proficiency throughout the training year. They ensure that all individuals, squads, crews, and platoons in a battalion are adequately trained and able to sustain weapon proficiency.

6–7. Live demolitions used as devices.

a. Demolition effects simulators (DES) use live demolitions.

(1) DES offers units the opportunity to use minimal explosives and increase repetitions of demolition events. The DES also reduces the normal risk associated with larger demolition charges. Stand-off safe distances are to be calculated and enforced using the charge (pounds) replicated.

(2) All safety precautions used for explosives and demolitions will be followed.

b. DES devices have the same basic components, packaging is the main difference. DES produces sufficient visual and sound effects to enhance battlefield training realism.

c. Commanders and supervisors are encouraged to use their allocation of detonation cord and initiators to train one event several times by constructing DES charges.

d. All DES charges will be constructed as detailed in TC 5-250.

6–8. Programs for combat Engineer and bridge units at TRC A

a. General. Training standards for each system are given below. Recommended training strategies for all systems except the CEV are given in table 6-6 (Individual Training) and table 6-7 (Unit Training). The ammunition requirements for all systems except the CEV are given in table 6-8. The recommended training strategy and ammunition requirements for the CEV are given in table 6-9.

b. AT and AP mine standard.

(1) Ninety percent of assigned soldiers with an SM requirement must have employed mines to SM standards: (Install and remove the M15 AT mine, M19 AT mine, M21 AT mine and inert US anti-handling devices on AT mines) within the past 12 months.

Note. Each combat Engineer Squad is allocated 1 each live M15AT, M19AT and M21AT mine in accordance with table 6-8. Each combat Engineer must arm and disarm each type live mine allocated to meet the individual training requirement. The M21AT mine will not be employed in the tilt rod mode. Only inert anti-handling devices will be used in training on inert mines (PTM kit). (Live anti-handling device may be used on inert metallic mines to achieve the training strategy. See table 6-6.)

(2) All combat Engineer squads and platoons must have met MTP standards. (Install/recover a hasty protective minefield, Emplace, using the inert Hornet, a tactical minefield and Emplace a tactical (row minefield) within the past 12 months.)

(3) All bridge crews with an MTP requirement must have employed inert mines to MTP standards within the past 12 months. (Install/recover or transfer a hasty protective minefield.)

(4) When training with a live M16A1 AP mine, trip wires will not be used. M16AP mine arming/disarming (use) is restricted to those units assigned to Eighth U.S. Army, Korea. No units at other locations are authorized to train with AP mines. A Presidential Decision Directive (PDD 48) on antipersonnel land-mine policy was signed on 26 June 1996. This policy restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past 6 months. (Construct an MDI detonating assembly, prime explosives with MDI and prime explosives with detonating cord.)

(2) All combat Engineer squads with an MTP requirement must have employed inert and live demolitions to MTP standards in accordance with the frequencies in table 6-7. (Disable bridge with explosives; construct an abatis; breach obstacles.) The MTP standard for the task, construct an abatis, states that an abatis must be 75 meters long; however, the requirement is for a six-tree abatis.

(3) All bridge crews must employ inert demolitions to MTP standards within the past 6 months. (Disable organic bridge.)

d. Shaped charge/cratering charge standard. All combat Engineer squads must have employed inert and live demolitions to create a three-hole hasty road crater to MTP standards within the past 6 months. (Create a crater obstacle with explosives; disable a LOC/airfield.)

e. Bangalore torpedo standard. All combat Engineer squads must have employed a live Bangalore torpedo to MTP standards within the past 6 months. (Breach obstacles, wire obstacle.) (See paragraph 6-3*c*(9)). This requirement will discontinue as current supply is exhausted.

f. MOPMS standard. All combat Engineer squads and bridge crews must have participated in the installation and recovery of the MOPMS training dispenser (M136) to operator's manual standards within the past 6 months. Emplace a tactical, scatterable, minefield.)

g. Flipper standard (for units authorized the flipper).

(1) Ninety percent of the assigned Platoon/Section members must have conducted preventive maintenance checks and services on the Flipper to operator's manual standards within the past 6 months.

(2) All platoons/sections must have emplaced a tactical (scatterable) minefield with the Flipper using M79 training mines, to MTP standards within the past six months. (Emplace a tactical, scatterable, minefield.)

h. MICLIC standard.

(1) All combat Engineer companies must have employed the MICLIC, to MTP standards using three inert line charges at home station within the past 12 months. (Conduct an in-stride breach of a minefield.)

(2) Units will fire live MICLIC during National Training Center (NTC) and Combat Maneuver Training Center (CMTC) rotations, depending on availability. Combat Training Centers (CTC) will be separately resourced to provide two live MICLIC charges per company per rotation.

i. Volcano standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have conducted the DCU-BIT to operator's manual standards within the past 6 months.

(2) The assault and obstacle platoon and/or section must have successfully employed the Volcano with the M88 and the M89 training device to MTP standards within the past 6 months. (Emplace a tactical, scatterable, minefield.) M88s are fired from the four corners only; M89s fill all other positions.

j. CEV standard. At the conclusion of a two gunnery density program (firing twice a year), all of the assigned crews must have

qualified on Table V. A qualified crew is a CEV commander and gunner that have met Table V standards together, within the past 12 months. To maintain standards, firing a portion of a crew twice in 1 year may occur. Minimal units will be authorized CEVs. Qualification will be one annual with the M970 subcaliber device, and one annual with the TP round. HEP is authorized for CALFEX/LFX. See table 6-9.

6–9. Programs for combat Engineer and bridge units at TRC C

a. General. Training standards for each system are given below. Recommended training strategies for all systems are given in table 6-10 (Individual Training) and table 6-11 (Unit Training). The ammunition requirements for all systems are given in table 6-12.

b. AT and AP mine standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have employed inert mines to SM standards within the past training year. (Install/remove the M15 AT mine, M19 AT mine, M21 AT mine and inert US anti-handling devices.) (Live anti-handling devices may be used on inert metallic mines to achieve the training strategy. See table 6-6.)

(2) All combat Engineer squads and platoons must have met MTP standards within the past training year using inert mines. (Install/recover a hasty protective minefield; emplace, using the inert Hornet, a tactical minefield; emplace a tactical, row, minefield)

(3) All bridge crews must have employed inert mines to MTP standards, within the past training year. Install/remove or transfer a hasty protective minefield.) M16AP Mine arming/disarming (use) is restricted to those units assigned to Eighth U.S. Army, Korea. No units at other locations are authorized to train with AP mines (TRC C exception is provided in Chapter 9). A Presidential Decision Directive (PDD 48) on antipersonnel land-mine policy was signed on 26 June 1996. This policy restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Eighty percent of assigned soldiers with an SM requirement, must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past two training years. (Construct an MDI detonating assembly; prime explosives with MDI; and Prime explosives with detonating cord.)

(2) All combat Engineer squads must have employed inert and live demolitions to MTP standards in accordance with the frequencies in table 6-11 within the past two training years. (Disable a bridge with explosives; construct an abatis; breach obstacles.)

(3) All bridge crews must have employed inert demolitions to MTP standards within the past two training years. (Disable organic bridge.)

d. Shaped charge/cratering charge standard. All combat Engineer platoons and squads must have employed inert demolitions for a 3-hole hasty road crater to MTP standards within the past training year. (Create a crater obstacle with explosives; disable a LOC/airfield.)

e. Bangalore torpedo standard. All combat Engineer company/squads must have employed an inert Bangalore torpedo to MTP standards within the past training year. (Breach Obstacles, wire obstacle.) This requirement will discontinue as current supply is exhausted.

f. MOPMS standard. All combat Engineer squads and bridge crews must have participated in the installation and recovery of the MOPMS training dispenser (M136) to operator's manual standards within the past training year. (Emplace a tactical, scatterable, minefield.)

g. MICLIC standards.

(1) All combat Engineer companies will employ inert MICLICs to MTP standards within the past two training years. (Conduct an in-stride breach of a minefield.)

(2) Units will train the inert systems at home station and fire live MICLIC during National Training Center (NTC) rotations, depending on availability. NTC will be separately resourced to provide two live MICLIC charges per company per rotation.

h. Volcano standard.

(1) Eighty percent of assigned soldiers with an SM requirement must have conducted the DCU-BIT to operator's manual standards within the past training year.

(2) The assault and obstacle platoon/section must have successfully employed the Volcano with the M88 and the M89 training device to MTP standards within the past training year. (Emplace a tactical, scatterable, minefield.)

6–10. Programs for light Engineer units at TRC A

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-13 (Individual Training) and table 6-14 (Unit Training). This includes individual and unit training for Corps Airborne/LID. The ammunition requirements for all systems are given in tables 6-15 (LID/Corps Airborne) and 6-16 (Airborne/Assault).

b. AT and AP mine standard.

(1) Ninety percent of assigned soldiers with an SM requirement must have employed mines to SM standards within the past 4 months. (Install/remove M15 AT mine, M19 AT mine, M21 AT mine and US anti-handling devices on AT mines.)

Note. Each Engineer squad is allocated 1 each live M15AT, M19AT and M21AT mine in accordance with tables 6-15 and 6-16. Each combat Engineer must arm and disarm each type live mine allocated to meet the individual training requirement. The M21AT mine will not be employed in the tilt rod mode. Only inert anti-handling devices will be used in training on inert mines (PTM kit). (Live anti-handling device may be used on inert metallic mines to achieve the training strategy. See table 6-6.)

(2) All combat Engineer squads must have met MTP standards within the past 12 months. (Install/recover a hasty protective minefield; emplace, using the inert Hornet, a tactical minefield; emplace a tactical, row, minefield.) A Presidential Decision Directive (PDD 48) on antipersonnel land-mine policy was signed 26 June 1996. This policy restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Ninety percent of assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past 4 months. (Construct an MDI detonating assembly, prime explosives with MDI; prime explosives with detonating cord.)

(2) All combat Engineer squads with an MTP requirement must have employed inert and live demolitions to MTP standards in accordance with the frequencies in table 6-14. (Disable bridge with explosives; construct an abatis; breach obstacles.)

Note. The MTP standard for the task, construct an abatis, states that an abatis must be 75 meters long; however, the requirement is for a 6-tree abatis.

d. Shape charge/cratering charge standard. All combat Engineer squads must have employed inert and live demolitions to create a 3-hole hasty road crater to MTP standards within the past 6 months. (Create a crater obstacle with explosives; disable a LOC/airfield.)

e. Bangalore torpedo standard. All combat Engineer squads must have employed a live Bangalore torpedo to MTP standards within the past 6 months. (Breach Obstacle, wire obstacle.) This requirement will discontinue as current supply is exhausted.

f. MOPMS standard. All combat Engineer squads and bridge crews must have participated in the installation and recovery of the MOPMS training dispenser (M136) to operator's manual standards within the past six months. (Emplace a tactical, scatterable, minefield.)

g. MICLIC standard. All combat Engineer companies (airborne) must have employed the MICLIC, to MTP standards using three inert line charges at home station within the past 12 months. (Conduct an in-stride breach of a minefield.)

h. Volcano standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have conducted the DCU-BIT to operator's manual standards within the past 6 months.

(2) The assault and obstacle platoon/section must have successfully employed the Volcano with the M88 and the M89 training device to MTP standards within the past 6 months. Emplace a tactical, scatterable, minefield.)

i. Munition standard. All combat Engineer squads must have employed inert SLAM 6 times a year. This strategy requires a predeployment firing of a live SLAM at a ratio 1 SLAM to 10 soldiers.

6–11. Programs for light Engineer units at TRC C

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-17 (Individual Training) and table 6-18 (Unit Training). This includes individual and unit training for Corps Airborne/LID. The ammunition resources for all systems are given in table 6-19 (LID/Corps Airborne).

b. Antitank, antipersonnel mine standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have employed inert mines to Soldier's Manual standards within the past training year. Install/remove the M15 AT mine, M19 AT mine, M21 AT mine and inert US anti-handling devices.) (Live anti-handling devices may be used on inert metallic mines to achieve the training strategy. See table 6-6.)

(2) All combat Engineer squads and platoons must have met MTP standards using inert mines within the past training year. (Install/recover a hasty protective minefield; emplace, using the inert Hornet, a tactical minefield; emplace a tactical, row, minefield.) A Presidential Decision Directive (PDD 48) on antipersonnel land-mine policy was signed on 26 June 1996. This policy restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past training year. (Construct an MDI detonating assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) All combat Engineer squads must have employed inert and live demolitions to MTP standards in accordance with the frequencies in table 6-18 within the past training year. Disable a bridge with explosives; construct an abatis; breach obstacles)

d. Shape charge/cratering charge standard. All combat Engineer squads must have employed inert and live demolitions for a 3-hole hasty road crater to MTP standards within the past training year. (Create a crater obstacle with explosives; disable a LOC/airfield.)

e. Bangalore torpedo standard. All combat Engineer squads must have employed an inert Bangalore torpedo to MTP standards within the past training year. (Breach obstacles, wire obstacle.) This requirement will discontinue as current supply is exhausted.

f. MOPMS standard. All combat Engineer squads must have participated in the installation and recovery of the MOPMS training dispenser (M136) to operator's manual standards within the past training year. (Emplace a tactical, scatterable, minefield.)

g. Volcano standard.

(1) Eighty percent of assigned soldiers with an SM requirement must have conducted the DCU-BIT to operator's manual standards within the past training year.

(2) The assault and obstacle platoon/section must have successfully employed the Volcano with the M88 and the M89 training device to MTP standards within the past training year. (Emplace a tactical, scatterable, minefield.)

h. Munition standard. All combat Engineer squads must have employed inert SLAM 6 times a year. This strategy requires post mobilization/pre-deployment firing of a live SLAM at a ratio of 10 soldiers to 1 SLAM.

6–12. Programs for combat heavy Engineers at TRC A

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-20 (Individual Training) and table 6-21 (Unit Training). The ammunition requirements are given in table 6-22.

b. Antitank, antipersonnel mine standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have employed live and inert mines to SM standards within the past 12 months. (Install/remove M16A1 AP mine (Korea only), M15 AT mine, M19 AT mine, M21 AT mine, inert US anti-handling devices.) Each line squad in the vertical construction platoon is allocated 1 each live M15AT, M16A1AP (Korea only), M19AT and M21AT mine in accordance with table 6-22. Each line squad member in the vertical construction platoon must arm and disarm each type live mine allocated to meet the individual training standard. When training with a live M16A1 AP, trip wires will not be used. The M21AT mine will not be employed in the tilt rod mode. Only inert anti-handling devices will be used in training on inert mines (PTM kit). (Live anti-handling devices may be used on inert metallic mines to achieve the training strategy. See table 6-6.)

(2) All squads and platoons with an MTP requirement must have met MTP standards using inert mines within the past 12 months. (Install/recover or transfer a hasty protective minefield; emplace, using the inert Hornet, a tactical minefield; emplace a tactical, row, minefield.) M16AP mine arming/disarming (use) is restricted to those units assigned to Eighth U.S. Army, Korea. No units at other locations are authorized to train with AP mines. A Presidential Decision Directive (PDD 48) on antipersonnel land-mine policy was signed on 26 June 1996. This policy restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past 12 months. Construct an MDI initiating/detonating assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) All squads with an MTP requirement must have employed inert and live demolitions to MTP standards within the past 12 months. (Disable bridge with explosives; construct an abatis; breach obstacle with explosives.)

d. Shape charge/cratering charge standard. All combat Engineer squads with an MTP requirement must have employed inert and live demolitions to create a 3-hole hasty road crater to MTP standards within the past 12 months. (Create a crater obstacle with explosives; disable a LOC/airfield.)

e. Bangalore torpedo standard. All combat Engineer squads with an MTP requirement must have employed an inert Bangalore torpedo to MTP standards within the past 12 months. (Breach obstacles, wire obstacle.) This requirement will discontinue as current supply is exhausted.

6–13. Programs for combat heavy Engineers at TRC C

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-23 (Individual Training) and table 6-24 (Unit Training). The ammunition requirements are given in table 6-25

b. Antitank, antipersonnel mine standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have employed inert mines to SM standards within the past training year. (Install/remove M15 AT mine, M19 AT mine, M21 AT mine, US anti-handling devices.)

(2) All squads and platoons with an MTP requirement must have met MTP standards using inert mines within the past training year. (Install/recover or transfer a hasty protective minefield; emplace, using the inert Hornet, a tactical minefield; emplace a tactical, row, minefield) A Presidential Decision Directive (PDD 48) on antipersonnel land-mine policy was signed on 26 June 1996. This policy restricts the use of conventional antipersonnel mines (TRC C exception is provided in Chapter 9). Mines or mine systems containing

antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have constructed inert demolition firing systems and inert primed explosives to SM standards within the past training year. (Construct an MDI initiating/detonating assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) All squads with an MTP requirement must employ inert demolitions to MTP standards within the past training year. (Disable bridge with explosives; construct an abatis; breach obstacles.)

d. Shape charge/cratering charge standard. All squads with an MTP requirement must have emplaced inert demolitions to create a 3-hole hasty road crater to MTP standards within the past training year. (Create a crater obstacle with explosives; disable a LOC/airfield.)

e. Bangalore torpedo standard. All squads with an MTP requirement must have employed an inert Bangalore torpedo to MTP standards within the past training year. (Breach obstacles, wire obstacle.) This requirement will discontinue as current supply is exhausted.

6–14. Programs for combat arms (Armor, armored Cavalry, Infantry) at TRC A

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in tables 6-26 (Individual Training) and 6-27 (Unit Training). The ammunition requirements for all systems are given in tables 6-28 (Infantry) and 6-29 (Armor/Cavalry).

b. Antitank, antipersonnel mine standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have employed inert mines to SM standards within the past training year. (Install/remove the M16A1 AP mine (Korea only), M15 AT mine, M19 AT mine, M21 AT mine and inert US anti-handling devices.)

(2) All squads and platoons with an MTP requirement must have met MTP standards using inert mines within the past training year. (Install/recover or transfer a hasty protective minefield; emplace a tactical, row, minefield.) M16AP Mine arming/disarming (use) is restricted to those units assigned to Eighth U.S. Army, Korea. No units at other locations are authorized to train with AP mines. A Presidential Decision Directive (PDD 48) on antipersonnel landmine policy was signed on 26 June 1996. This policy restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past training year. (Construct an MDI initiating/detonating assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) All squads must have employed inert and live demolitions to MTP standards within the past training year. (Breach obstacles.)

d. Bangalore torpedo standard. All squads must have employed an inert Bangalore torpedo to MTP standards within the past 12 months. (Breach obstacles, wire obstacle.) Infantry (less mechanized) squads must have also employed a live Bangalore torpedo to MTP standards within the past year. (Breach obstacles, wire obstacle.) This requirement will discontinue as current supply is exhausted.

e. MOPMS standard. All squads must have installed and recovered the MOPMS training dispenser (M136) to operator's manual standards within the past training year. (Emplace a tactical, scatterable, minefield.)

6–15. Programs for combat arms (Armor, armored Cavalry, Infantry) at TRC C

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-30 (Individual Training) and table 6-31 (Unit Training). Limited live demolitions for reinforcement training are given at table 6-32.

b. Antitank, antipersonnel mines standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have employed inert mines to SM standards within the past training year. (Install/remove the M15 AT mine, M19 AT mine, M21 AT mine and inert US Anti-handling devices.)

(2) All squads and platoons with an MTP requirement must have met MTP standards using inert mines within the past training year. (Install/recover or transfer a hasty protective minefield; emplace a tactical, row, minefield.) M16AP Mine arming/disarming (use) is restricted to those units assigned to Eighth U.S. Army, Korea. No units at other locations are authorized to train with AP mines. A Presidential, Executive Order signed 12 February 1996 restricts the use of conventional antipersonnel mines. Mines or mine systems containing antipersonnel mines with self destruct capabilities are authorized for training.

c. Demolition standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives with inert devices to SM standards within the past training year. (Construct an MDI initiating/detonating assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) All squads must employ inert demolitions to MTP standards within the past training year. (Breach obstacles.)

d. Bangalore torpedo standard. All squads must have employed an inert Bangalore torpedo to MTP standards within the past training year. (Breach obstacles, wire obstacle.) This requirement will discontinue as current supply is exhausted.

e. MOPMS standard. All squads must have installed and recovered the MOPMS training dispenser (M136) to operator's manual standards within the past training year. (Emplace a tactical, scatterable, minefield.)

6–16. Programs for chemical units for TRC A

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-33 (Individual Training) and table 6-34 (Unit Training). The ammunition requirements are given in table 6-35.

b. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have employed live and inert demolitions to SM standards within the past training year. Construct an MDI detonations assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) All chemical platoons with an MTP requirement must have employed inert and live demolitions to construct flame field expedients to MTP standards within the past 12 months. (Exploding flame land mine, 55 gallon flame FUGAS, 55 gallon flame land mine, (non-directional), hasty emplacement (wall of flame) and employ a HUSCH flare.)

6–17. Programs for chemical units for TRC C

a. General. Training standards for each system are given below. Recommended training strategies for all systems are given in tables 6-36 (Individual Training) and 6-37 (Unit Training).

b. Demolition standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have employed inert demolitions to SM standards within the past training year. (Construct an MDI detonations assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) All chemical platoons with an MTP requirement must have employed inert demolitions to construct inert flame field expedients to MTP standards within the past training year. (Exploding flame land mine, 55 gallon flame FUGAS, 55 gallon flame land mine (non-directional); hasty emplacement (wall of flame); employ a HUSCH flare.)

6–18. Programs for ordnance units for TRC A

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-38

(Individual Training) and table 6-39 (Unit Training). The ammunition requirements are given in table 6-40.

b. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have employed live demolitions to SM standards within the past training year. (Construct an MDI detonations assembly; prime explosives with MDI; prime explosives with detonating cord.)

c. Shaped charge standard. All platoons with an MTP requirement must have employed live demolitions to MTP standards within the past 12 months. (Emergency destruction of ammunition by detonation.)

6–19. Programs for ordnance units for TRC C

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in table 6-41 (Individual Training) and table 6-42 (Unit Training).

b. Demolition standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have employed inert demolitions to SM standards within the past training year. (Construct an MDI detonations assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) *Shaped charge standard.* All platoons with an MTP requirement must have employed inert demolitions to MTP standards within the past training year. (Emergency destruction of ammunition by detonation.)

6–20. Programs for EOD detachments (TRC A)

a. General. Training standards are given for each system. Recommended training strategies are given in tables 6-43 (Individual Training) and 6-44 (Unit Training). The ammunition requirements are given in table 6-45.

b. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past 6 months. (Construct a non-electric initiating/detonating assembly; prime explosives non-electrically; prime explosives with detonating cord.)

(2) Each detachment with an MTP requirement must have constructed demolition firing systems to MTP standards within the past 6 months. (Render safe and disposal procedures.)

c. EOD procedures standard.

(1) Ninety percent of all assigned soldiers with an SM requirement must have used the caliber .50 Dearmer, rocket wrench, and cutter, HE MK 23 Mod 0 and MK 24 Mod 0 EXROD, to SM standards within the past 6 months. (Perform EOD procedures using the caliber .50 Dearmer; perform EOD procedures using the rocket wrench; perform EOD procedures using the cutter, HE MK 23 Mod 0 and MK 24 Mod 0 EXROD.)

(2) Each detachment with an MTP requirement must have performed EOD procedures with the caliber .50 Dearmer, rocket wrench, and cutter, HE MK 23 Mod 0 and MK 24 Mod 0 EXROD to MTP standards within the past 6 months. (Render safe procedures.)

(3) EOD training will be authorized modernized demolition initiators to supplement training. Uniqueness of the EOD mission will determine the final mode of demolitions initiators.

6–21. Programs for EOD detachments (TRC C)

a. General. Training standards are given for each system. Recommended training strategies for all systems are given in tables 6-46 (Individual Training) and 6-47 (Unit Training). The ammunition requirements are given in table 6-48.

b. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have conducted demolition firing systems and primed explosives for live fire to SM standards within the past training year. (Construct a non-electric initiating/detonating assembly; prime explosives non-electrically; prime explosives with detonating cord.)

(2) Each detachment with an MTP requirement must have constructed demolition firing systems to MTP standards within the past training year. (Render safe and disposal procedures.)

c. EOD procedures standard.

(1) Ninety percent of all assigned soldiers with an SM requirement must use the caliber .50 Dearmer, rocket wrench, and cutter, HE MK 23 Mod 0 and MK 24 Mod 0 EXROD, to SM standards within the past training year. Perform EOD procedures using the caliber .50 Dearmer; perform procedures using the rocket wrench; perform procedures using the Cutter, HE MK 23 Mod 0 and MK 24 Mod 0 EXROD.)

(2) EOD training will be authorized modernized demolition initiators to supplement training. Uniqueness of the EOD mission will determine the final mode of demolitions initiators.

6–22. Programs for diving detachments (TRC A)

a. General. Training standards are given for each system. Recommended training strategies are given in tables 6-49 (Individual Training) and 6-50 (Unit Training). The ammunition requirements are given in table 6-51.

b. Demolition standard.

(1) Ninety percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past 6 months. (Construct an MDI initiating/detonating assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) Each diving detachment with an MTP requirement must have constructed demolition firing systems to MTP standards within the past 6 months. (Clear underwater obstacles using demolitions.)

6–23. Programs for diving detachments (TRC C)

a. General. Training standards are given for each system. Recommended training strategies are given in tables 6-52 (Individual Training) and 6-53 (Unit Training). The ammunition requirements are given in table 6-54.

b. Demolition standard.

(1) Eighty percent of the assigned soldiers with an SM requirement must have constructed demolition firing systems and primed explosives for live fire to SM standards within the past training year. (Construct an MDI initiating/detonating assembly; prime explosives with MDI; prime explosives with detonating cord.)

(2) Each diving detachment with an MTP requirement must have constructed demolition firing systems to MTP standards within the past training year. (Clear underwater obstacles using demolitions.)

6–24. Programs for Aviation units at TRC A and C

a. General. Training standards are given for the Volcano system.

b. Volcano. Seventy five percent of the assigned pilots-in-command (PIC) must have operated the Volcano system in accordance with the Aircrew Training Manual (ATM) within the last training year. Simulation operation will include the gravity change associated with the aircraft unload of Volcano canisters. Actual dispersion is not required due to the high cost.

6–25. Programs for other Engineers, other combat arms and combat support/combat service support at TRCs A and C

a. General. Training standards are given. Recommended training strategies are given in table 6-55 (Individual Training) and table 6-56 (Unit Training). All training is completed with inert munitions or devices.

b. Antitank, antipersonnel standard (TRC A).

(1) Ninety percent of the assigned soldiers with an SM requirement must have employed inert mines to SM standards within the past year. (Install/remove the M15 AT mine, M19 AT mine, M21 AT mine, inert US Anti-handling devices.)

(2) All squads and platoons with an MTP requirement must have met MTP standards using inert mines within the past year. (Install/recover or transfer a hasty protective minefield; emplace, using the inert Hornet, a tactical minefield; emplace a tactical, row, minefield.)

c. Antitank, antipersonnel standard (TRC C).

(1) Eighty percent of the assigned soldiers with an SM requirement must have employed inert mines to SM standards within the past training year. (Install/remove the M15 AT mine, M19 AT mine, M21 AT mine, inert US anti-handling devices.)

(2) All squads and platoons with an MTP requirement must have met MTP standards using inert mines within the past training year. (Install/recover or transfer a hasty protective minefield; emplace, using the inert Hornet, a tactical minefield; Emplace a tactical, row, minefield.)

Table 6–4
Engineer Weapon Systems Training Index (Branch Specific Weapon Systems)

Type Unit	TRC	System	Paragraph	Table
Combat Engineer and Bridge Units	A	Mines and Demolitions	6-8	6-6 to 6-8
		CEV		6-9
	C	Mines and Demolitions		6-10 to 6-12
Light Engineer Airborne/Air Assault/	A	Mines and Demolitions	6-10	6-13 to 6-16
Airborne Corps Units	C	Mines and Demolitions	6-11	6-17 to 6-19
Combat Heavy Engineer Units	A	Mines and Demolitions	6-12	6-20 to 6-22
	C	Mines and Demolitions	6-13	6-23 to 6-25
Combat Arms Units (IN/AR/CAV)	A	Mines and Demolitions	6-14	6-26 to 6-29
	C	Mines and Demolitions	6-15	6-30 to 6-32
Chemical Units	A	Demolitions	6-16	6-33 to 6-35
	C	Demolitions	6-17	6-36, 6-37
Ordnance Units	A	Demolitions	6-18	6-38 to 6-40
	C	Demolitions	6-19	6-41, 6-42
EOD Detachments[1]	A	Demolitions	6-20	6-43 to 6-45
	C	Demolitions	6-21	6-46 to 6-48
Diving Detachments	A	Demolitions	6-22	6-49 to 6-51
	C	Demolitions	6-23	6-52 to 6-54
Aviation Units	A and C	Volcano	6-24	
Other Engineer, Other Combat				
Arms, and CS/CSS Units	A and C	Mines	6-25	6-55 to 6-56

Notes:
[1] Identifies only "training" ammunition requirements for EOD units, not operational munitions—see para 6-4c.

Table 6–5
Engineer Weapon Systems Training Index—Other Weapon Systems

Type Unit	DODIC	Paragraph	Table
AT-4[1]		5-6	5-24
Machine gun	M249/M60	5-8	5-37,5-30
M3A1 SMG		5-9	5-42
Rifle	M-16A1/A2/A3	5-9	5-39
Grenade Launcher	M203	5-9	5-44
Machine Gun	M2 HB	5-8	5-32
Pistols		5-9	5-46
Hand Grenades	M228/M67	5-9	5-48
Claymore Mine (Cbt Eng, Other)	M18A1	5-9	5-49, 5-50
Dragon		5-6	5-21

Notes:
[1] Identifies only "training" ammunition requirements for EOD units, not operational munitions "see para 6-4c."

Table 6–6
Annual Individual Training for Combat Engineer/Bridge Crewman (TRC A)

Event	Freq
Demolitions[1]	
MDI detonating assembly	
Prime explosives with MDI	4
Prime explosives with det cord	4
Mine Warfare Installation/Removal[2]	
M16AP Mine (Korea only)	4
M15AT Mine	4
M19AT Mine	4
M21AT Mine	4
US Antihandling Devices[3]	4

Notes:

[1] Frequency allows for 2 live-fire qualification exercises and 2 inert sustainment exercises.

[2] Combat Engineer: Frequency allows for 1 live-fire qualification exercise and 3 inert sustainment exercises.
Bridge Crewmen: Frequency allows for 1 inert qualification exercise and 3 inert sustainment exercises.

[3] Frequency allows for 2 exercises using live antihandling devices on inert metallic mines and 2 exercises using inert antihandling devices on inert mines.

Table 6–7
Annual Unit Training for Combat Engineer/Bridge Units (TRC A)

Tasks	Freq	Munition/System	Event
Create a Crater Obstacle with Explosives	2/Live/Qualify 2/Inert/Sustain	Shaped Charge Crater Charge C-4	LFX, CALFEX, MTP
Disable Bridge With Explosives	2/Inert/Qualify 2/Inert/Sustain	 C-4	MTP FTX
Disable Organic Bridge	1/Inert/Qualify 2/Inert/Sustain	 C-4	MTP FTX
Construct an Abatis	1/Live/Qualify 1/Inert/Sustain	 C-4	LFX, CALFEX FTX, MTP
Breach Obstacles (other than Minefields)	2/Live/Qualify 2/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP
Breach Obstacles (Wire Obstacle)	2/Live/Qualify 2/Inert/Sustain	 Bangalore	LFX, CALFEX FTX, MTP
Breach Minefields using Explosives	2/Live/Qualify 2/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP
Install/Recover a Hasty Protective Minefield	1/Inert/Qualify 2/Inert/Sustain	 AT, AP Mines	MTP FTX
Conduct an In Stride Breach of a Minefield[1]	3/Inert/Qualify	MICLIC Inert Line Charge	LFX, CALFEX FTX, MTP
Disable LOC/Airfield With Explosives	 2/Inert/Sustain	Shaped Charge C-4 Crater Charge	MTP FTX
Emplace a Tactical Minefield (row)	1/Inert/Qualify 2/Inert/Sustain	AT, Mines	MTP FTX
Emplace a Tactical Minefield (Scatterable)	2/Inert/Sustain	MOPMS (XM136)	MTP FTX
Emplace a Tactical Minefield (Scatterable)	2/Inert/Qualify	Flipper	MTP FTX

Table 6–7
Annual Unit Training for Combat Engineer/Bridge Units (TRC A)—Continued

Tasks	Freq	Munition/System	Event
Emplace a Tactical Minefield (Scatterable)	2/Live/Qualify	Volcano (M88/M89)	LFX CALFEX

Notes:
[1] Home station includes three inert line charges as stock allows support. Home station ranges must be adequate for safe distance.

Table 6–8
Annual Ammunition Requirements for Combat Engineer/Bridge Units (TRC A)

Munition	DODIC	Battalion Hvy Div Cbt En	Sep Co Cbt En	Bridge
M15AT Mine	K180	18	9	
M16A1AP Mine (Korea only)	K092	18	9	
M19AT Mine	K250	18	9	
M21AT Mine	K181	18	9	
Rocket (5 inch)	J143	9	3	
Inert Line Charge[1]	M914	3	1	
M88 Volcano[2]	K042	24	8	(Total canisters per year)
Bangalore torpedo	M028	36	18	
Shaped Charge(15 or 40 lb)	M420	108	54	
Cratering Charge(40 lb.)	M039	108	54	
Demolitions-TNT(1 lb.)[3]	M032			
Demolitions-TNT(1/4 lb)[3]	M030			
Demolitions-C-4(1 1/4 lb)[3]	M023	3042	1521	426
Detonating Cord(FT)	M456	18360	9180	2173
Igniter M81	MN08	963	448	229
Nonelectric Cap M11	ML47	1031	483	247
Nonelectric Cap M12	MN02	102	53	27
Nonelectric Cap M13	MN03	102	53	27
Nonelectric Cap M14	MN06	828	377	193
Holder M9	ML45	687	322	164

Notes:
[1] Inert line charge may be reused 3 times before replacement is required.
[2] M88 canisters will be fired from the four corners only, all other positions will be filled with M89 canisters.
[3] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–9
Annual Ammunition Requirements and Training Strategy for the CEV (TRC A)

		7.62		7.62		40-mm			.50 Cal	7.62
Event/Table[1]	Freq[2]	Subcal	.50 Cal	Coax	.45 Cal	Subcal[3]	TP[4]	HEP	Blank	Blank
DODIC		A140	A520	A131	A479	B592	D590	D570	A599	A111
Zero (Subcal)	4	4								
IA	4	20								
IB	0	0								
IIA	4				10					

Table 6–9
Annual Ammunition Requirements and Training Strategy for the CEV (TRC A)—Continued

		7.62		7.62		40-mm			.50 Cal	7.62
Event/Table[1]	Freq[2]	Subcal	.50 Cal	Coax	.45 Cal	Subcal[3]	TP[4]	HEP	Blank	Blank
DODIC		A140	A520	A131	A479	B592	D590	D570	A599	A111
IIB	0									
Zero	1					6	4			
IIIA	1					4	4			
IIIB	0									
Zero	2		40	50						
Verification	2		15	15						
IVA	2		250	250						
IVB	0									
Verification (Subcal)	1				1					
VA (Subcal)	1		150	250	6					
VB (Subcal)	0									
Verification	1					1	1			
VA	1		150	250		6	6			
VB	0									
LFX	1		85	100	12			2		
FTX/STX	3								100	200
CALFEX/LFX	1		85	100	12	2	4			
Total per CEV		96	1230	1580	71	36	19	2	300	600

Notes:

[1] Table identification B (night firing) is suspended.

[2] Qualifications will be twice a year in combination of one TP qualification and one subcaliber qualification. When the circumstance requires, qualification may be subcaliber twice a year.

[3] M970 sub-cal will be used for qualification. A total of six rounds are authorized for zero due to crew unfamiliarity with the M970 and additional requirements to successfully use the trajectory conversion card. The M970 is the preferred method for qualification. TP rounds may be used for qualification until M970 is fielded.

[4] TP and HEP rounds listed as CALFEX/LFX may be fired after qualification or during a CALFEX/LFX.

Table 6–10
Annual Individual Training for Combat Engineer/Bridge Crewmen (TRC C)

Event	Freq
Demolitions[1]	
Construct MDI detonating assembly	3
Prime explosives with MDI	
Prime explosives with det cord	3
Mine Warfare Installation/Removal[2]	
M15AT Mine	3
M19AT Mine	3
M21AT Mine	3
U.S. Antihandling Devices (Inert Only)[3]	3

Notes:

[1] Frequency allows for 1 live-fire qualification exercise and 2 inert sustainment exercise.

[2] Frequency allows for 1 inert qualification exercise and 2 inert sustainment exercises.

[3] Frequency allows for 1 live antihandling device exercise on inert metallic mines.

Table 6–11
Annual Unit Training Combat Engineer/Bridge Units (TRC C)

Tasks	Freq	Munition/System	Event
Create a Crater Obstacle With Explosives	1/Inert/Qualify	Shaped Charge Crater Charge C-4	FTX, MTP
Disable Bridge With Explosives	1/Inert/Qualify	C-4	FTX, MTP
Disable Organic Bridge	1/Inert/Sustain 1/Inert/Qualify	C-4	FTX, MTP
Construct an Abatis	1/Inert/Qualify	C-4	FTX, MTP
Breach Obstacles (other than Minefield)	1/Live/Qualify 1/inert/Quality	C-4 C-4	LFX, CALFEX FTX, MTP
Breach Obstacles (Wire Obstacle)	1/Inert/Qualify	Bangalore	FTX, MTP
Breach Minefield using Explosives	1/Live/Qualify 1/Inert/Sustain		
Install/Recover/Transfer a Hasty Protective Minefield	1/Inert/Qualify	AT, AP Mines	FTX, MTP
Conduct an in stride of a Minefield	1/Inert/Qualify	MICLIC ROCKET 5 inch Inert Line Charge	LFX, CALFEX FTX, MTP
Disable LOC/Airfield With Explosives	2/Inert/Sustain	Shaped Charge, C-4 Crater Charge	FTX MTP
Emplace a Tactical Minefield (Hornet)	1/Inert/Qualify	AT, Mines	MTP
Emplace a Tactical Minefield (row)	1/Inert/Qualify	AT, Mines	MTP
Emplace a Tactical Minefield (Scatterable)	1/Inert/Qualify	Volcano (M88/M89)	FTX, MTP
Emplace a Tactical Minefield (Scatterable)	2/Inert/Qualify	MOPMS (M136)	MTP

Table 6–12
Annual Ammunition Requirements for Combat Engineer/Bridge Units (TRC C)

			Sep Co	
Munition	DODIC	Bn	Cbt En	Bridge
M15AT Mine	K180	0	0	
M19AT Mine	K250	0	0	
21AT Mine	K181	0	0	
Rocket (5 inch)	J143	3	1	
Inert line Charge[1]	M914	1	1	
M88 (Volcano)[2]	K042	24	8	
Bangalore torpedo	M028	8	2	
Shaped Charge (15 or 40 lb.)	M420	24	6	
Cratering Charge (40 lb.)	M039	24	6	
Demolitions—TNT (1 lb.)[3]	M032			
Demolitions—TNT (1/4 lb.)[3]	M030			
Demolitions—C-4 (1-1/4 lb.)[3]	M023	1319	324	213
Detonating Cord (Ft)	M456	3203	1378	1704
Igniter M81	MN08	107	46	90
Nonelectric Cap M11	ML47	129	56	108
Nonelectric Cap M12	MN02	65	28	27
Nonelectric Cap M13	MN03	65	28	27
Nonelectric Cap M14	MN06	65	28	18

Table 6–12
Annual Ammunition Requirements for Combat Engineer/Bridge Units (TRC C) —Continued

		Sep Co		
Munition	DODIC	Bn	Cbt En	Bridge
Holder M9	ML45	108	47	60

Notes:

[1] Inert Line Charge will be reused 3 times before replacement.

[2] Battalion authorizations may reduce with TOE changes. Four M88s per company is constant. M88 canisters will be fired from the four corners **ONLY.** All other positions will be filled with M89 canisters.

[3] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–13
Annual Individual Training for Light Engineer/Airborne Units (TRC A)

Event	Freq[1]
Demolitions	
Construct MDI detonating assembly	
Prime explosives with MDI	6
Prime explosives with det cord	6
Mine Warfare Installation/Removal	
M15AT Mine	6
M19AT Mine	6
M21AT Mine	6
US Antihandling Devices[2]	6
Hornet[3]	6
Munition	
SLAM[4]	6

Notes:

[1] Frequency allows for 3 live-fire qualification exercises and 3 inert sustainment exercises.

[2] Frequency allows for 4 live antihandling device exercises on inert metallic mines and 2 inert exercises with inert antihandling device on inert mines.

[3] Frequency allows for 6 inert exercises.

[4] Frequency allows for 6 inert exercises. This strategy requires a predeployment live-fire exercise at a ratio of 10 soldiers to 1 SLAM.

Table 6–14
Annual Unit Training for Light Engineer Airborne/Air Assault/Airborne Corps Units (TRC A)

Tasks	Freq	Munition/System	Event
Create a Crater Obstacle With Explosives	2/Live/Qualify 2/Inert/Sustain	Shaped Charge Crater Charge C-4	LFX, CALFEX MTP
Disable Bridge With Explosives	1/Inert/Qualify 3/Inert/Sustain	C-4	MTP FTX
Construct an Abatis	1/Live/Qualify 1/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP
Breach Obstacles (other than Minefield)	2/Live/Qualify 2/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP
Breach Obstacles (Wire Obstacle)	2/Live/Qualify 2/Inert/Sustain	Bangalore	LFX, CALFEX FTX, MTP
Breach Minefield Using Explosives	2/Live/Qualify 2/Inert/Qualify		
Install/Recover a Hasty Protective Minefield	1/Inert/Qualify 3/Inert/Sustain	AT, AP Mines	MTP FTX
Conduct in stride Breach of a Minefield (Airborne Only)	1/Live/Qualify 3/Inert/Qualify	MICLIC 3 Inert Line Charge	LFX, CALFEX FTX, MTP
Disable LOC/Airfield With Explosives	2/Inert/Qualify 2/Inert/Sustain	Shaped Charge, C-4 Crater Charge	MTP FTX
Emplace a Tactical Minefield	6/Inert	Hornet	MTP FTX

Table 6–14
Annual Unit Training for Light Engineer Airborne/Air Assault/Airborne Corps Units (TRC A)—Continued

Tasks	Freq	Munition/System	Event
Emplace a Tactical Minefield (row)	1/Inert/Quality 2/Inert/Sustain	AT, Mines	MTP FTX
Emplace a Tactical Minefield (Scatterable)	2/Inert/Qualify	MOPMS (M136)	MTP[1] FTX
Emplace a Tactical Minefield (Scatterable)	1/Live/Qualify	Volcano (M88/M89)	LFX CALFEX
Emplace Munitions	6/Inert	SLAM	MTP FTX

Table 6–15
Annual Ammunition Requirements for Combat Engineer Battalion LID/Corps Airborne (TRC A)

			Sep Co
Munition	DODIC	Bn	Cbt En
M15AT Mine	K180	54	18
M19AT Mine	K250	54	18
M21AT Mine	K181	54	18
Rocket, 5 inch (MICLIC)	J143	9	3
Inert Line Charge[1]	M914	3	1
Bangalore torpedo	M028	36	12
Shaped Charge (15 or 40 lb.)	M420/421	108	36
Cratering Charge (40 lb.)	M039	108	36
M88 Volcano[2]	K042	24	8
Demolitions—TNT (1 lb.)[3]	M032		
Demolitions—TNT (1/4 lb.)[3]	M030		
Demolitions—C-4 (1 1/4 lb.)[3]	M023	3119	1022
Detonating Cord (Ft)	M456	18972	6180
Igniter M81	MN08	1530	1224
Nonelectric Cap M11	ML47	1620	1296
Nonelectric Cap M12	MN02	135	108
Nonelectric Cap M13	MN03	135	108
Nonelectric Cap M14	MN06	1350	1080
Holder M9	ML45	1080	864

Notes:

[1] Inert line charge will be reused 3 times before replacement.

[2] M88 canister will be fired from the four corners ONLY. All other positions will be filled with M89 canisters.

[3] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–16
Annual Ammunition Requirements for Combat Engineer Bn Airborne/Assault Div (TRC A)

Munition	DODIC	Bn
M15AT Mine	K180	81
M16A1AP Mine (Korea only)	K092	81
M19AT Mine	K250	81
M21AT Mine	K181	81

Table 6–16
Annual Ammunition Requirements for Combat Engineer Bn Airborne/Assault Div (TRC A) —Continued

Munition	DODIC	Bn
Rocket (MICLIC), 5 Inch	J143	9
Inert Line Charge[1]	M914	3
Bangalore torpedo	M028	54
Shaped Charge (15 or 40 lb.)	M420/M421	162
Cratering Charge (40 lb.)	M039	162
M88 Volcano[2]	K042	24
Demolitions—TNT (1 lb.)[3]	M032	
Demolitions—TNT (1/4 lb.)[3]	M030	
Demolitions—C-4 (1-1/4 lb.)[3]	M023	4626
Detonating Cord (FT)	M456	28044
Igniter M81	MN08	1836
Nonelectric Cap M11	ML47	1944
Nonelectric Cap M12	MN02	162
Nonelectric Cap M13	MN03	162
Nonelectric Cap M14	MN06	1620
Holder M9	ML45	1296

Notes:

[1] Inert Line Charge will be reused 3 times before replacement.

[2] M88 canisters will be fired from the four corners ONLY. All other positions will be filled with M89 canisters.

[3] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–17
Annual Individual Training for Light Engineer Units (TRC C)

Event	Freq
Demolitions[1]	
Construct MDI detonating assembly	
Prime explosives with MDI	3
Prime explosives with det cord	3
Mine Warfare Installation/Removal[2]	
M15AT Mine	3
M19AT Mine	3
M21AT Mine	3
U.S. Antihandling Devices (Inert Only)	3
Hornet[3]	3
Munition	
SLAM[4]	3

Notes:

[1] Frequency allows for 1 live-fire qualification exercise and 2 inert sustainment exercises.

[2] Combat Engineer: Frequency allows for 1 inert qualification exercise and 2 inert sustainment exercises.

[3] Frequency allows for 3 inert exercises.

[4] Frequency allows for 3 inert exercises. This strategy requires a post mobilization/predeployment live-fire exercise at the ratio of 10 soldiers to 1 SLAM.

Table 6–18
Annual Unit Training for Light Engineer Units (TRC C)

Tasks	Freq	Munition/System	Event
Create a Crater Obstacle With Explosives	1/Live/Qualify	Shaped Charge Crater Charge C-4	LFX, CALFEX MTP
Disable Bridge With Explosives	1/Inert/Qualify	C-4	MTP FTX
Construct an Abatis	1/Live/Qualify	C-4	LFX, CALFEX FTX, MTP
Breach Obstacles (other than Minefield)	1/Live/Qualify 1/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP
Breach Obstacle (Wire Obstacle)	1/Live/Qualify 2/Inert/Sustain	Bangalore	LFX, CALFEX FTX, MTP
Breach Obstacle (with Explosives)	1/Live/Qualify 1/Inert/Sustain		
Install/Recover a Hasty Protective Minefield	1/Inert/Qualify	AT, AP Mines	MTP FTX
Disable LOC/Airfield	1/Inert/Qualify 1/Inert/Sustain	Shaped Charge C-4 Crater Charge	MTP FTX
Emplace a Tactical Minefield	3/Inert	Hornet	MTP FTX
Emplace a Tactical Minefield (Scatterable)	1/Inert/Qualify	MOPMS (M136)	MTP[1] FTX
Emplace a Tactical Minefield (row)	1/Inert/Qualify 2/Inert/Sustain	AT, Mine	MTP FTX
Emplace a Tactical Minefield (Scatterable)	1/Live/Qualify	Volcano (M88/M89)	CALFEX LFX
Emplace Munitions	3/Inert	SLAM	FTX MTP

Notes:
[1] M79 training mine will be used for this task.

Table 6–19
Annual Ammunition Requirements for LID En (TRC C)

Munition	DODIC	Bn	Sep co
M15AT Mine	K180	0	0
M19AT Mine	K250	0	0
M21AT Mine	K181	0	0
Bangalore torpedo	M028	18	6
Shaped Charge (15 or 40 lb.)	M420/421	54	18
Cratering Charge (40 lb.)	M039	54	18
M88 Volcano[1]	K042	24	8
Demolitions—TNT (1 lb.)[2]	M032		
Demolitions—TNT (1/4 lb.)[2]	M030		
Demolitions—C-4 (1 1/4 lb.)[2]	M023	1868	617
Detonating Cord (FT)	M456	8190	3510
Igniter M81	MN08	441	189
Nonelectric Cap M11	ML47	462	198
Nonelectric Cap M12	MN02	63	27
Nonelectric Cap M13	MN03	63	27
Nonelectric Cap M14	MN06	399	171

Table 6–19
Annual Ammunition Requirements for LID En (TRC C)—Continued

Munition	DODIC	Bn	Sep co
Holder M9	ML45	329	141

Notes:

[1] M88 canisters will be fired from all four corners ONLY. All other positions will be filled with M89 canisters.

[2] Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

[3] This table provides ammunition requirements for units with 18 squads.

Table 6–20
Annual Individual Training for Combat Heavy Engineer (TRC A)

Event	Freq[1]
Demolitions	
Construct MDI detonating assembly	
Prime explosives with MDI	4
Prime explosives with det cord	4
Mine Warfare Installation/Removal	
M16AP Mine (Korea only)	4
M15AT Mine	4
M19AT Mine	4
M21AT Mine	4
U.S. Antihandling Devices (Inert Only)	4

Notes:

[1] Frequency allows for 1 live-fire qualification exercise and 3 inert sustainment exercise.

Table 6–21
Annual Unit Training for Combat Heavy Engineer (TRC A)

Tasks	Freq	Munition/System	Event
Create a Crater Obstacle With Explosives	1/Live/Quality 1/Inert/Sustain	Shaped Charge Crater Charge C-4	LFX, CALFEX FTX
Disable Bridge With Explosives	1/Inert/Qualify	C-4	FTX, MTP
Construct an Abatis	1/Inert/Qualify	C-4	FTX, MTP
Breach Obstacles (other than Minefield)	1/Inert/Sustain 1/Live/Qualify	C-4	LFX, CALFEX FTX, MTP
Breach Obstacles (Wire Obstacle)	1/Inert/Qualify 1/Inert/Sustain	Bangalore	FTX, MTP
Breach Obstacles using Explosives	1/Live/Qualify 1/Inert/Sustain	C-4	
Install/Recover/Transfer a Hasty Protective Minefield[1]	1/Inert/Qualify 1/Inert/Sustain	AT, AP Mines	FTX, MTP
Disable LOC/Airfield with Explosives[1]	1/Inert/Sustain	Shaped Charge C-4 Crater Charge	FTX, MTP
Emplace a Tactical Minefield (Hornet)1	1/Inert/Qualify 1/Inert/Sustain	AT, AP Mines	FTX, MTP
Emplace a Minefield (row)	1/Inert/Qualify 1/Inert/Sustain	AT, AP Mines	FTX, MTP

Notes:

[1] AP Mines are restricted to those units assigned to Eighth, U.S. Army, Korea.

Table 6–22
Annual Ammunition Requirements for Combat Heavy Engineer (TRC A)

Munition	DODIC	Bn	Sep Co
M15AT Mine	K180	18	6
M16AP Mine (Korea only)	K092	18	6
M19AT Mine	K250	18	6
M21AT Mine	K181	18	6
Shaped Charge (15 or 40 lb.)	M420/421	54	18
Bangalore torpedo	M028	12	4
Cratering Charge (40 lb)	M039	54	18
Demolitions—TNT (1 lb)[1]	M032		
Demolitions—TNT (1/4 lb.)[1]	M030		
Demolitions—C-4 (1 1/4 lb.)[1]	M023	1106	363
Detonating Cord (Ft)	M456	5400	1622
Igniter M81	MN08	400	300
Nonelectric Cap M11	ML47	216	192
Nonelectric Cap M12	MN02	54	18
Nonelectric Cap M13	MN03	54	18
Nonelectric Cap M14	MN06	200	156
Holder M9	ML45	144	128

Notes:
[1] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–23
Annual Individual Training for Combat Heavy Engineer (TRC C)

Event	Freq[1]
Demolitions	
Construct MDI detonating assembly	
Prime explosives with MDI	3
Prime explosives with det cord	3
Mine Warfare Installation/Removal	
M15AT Mine	3
M19AT Mine	3
M21AT Mine	3
U.S. Antihandling Devices (Inert Only)	3

Notes:
[1] Frequency allows for 1 inert qualification exercise and 2 inert sustainment exercises.

Table 6–24
Training Year Events for Combat Heavy Engineer (TRC C)

Tasks	Freq	Munition/System	Event
Create a Crater Obstacle With Explosives	1/Live/Sustain/Biennial 1/Inert/Qualify	Shaped Charge Crater Charge C-4	FTX
Disable Bridge With Explosives	1/Inert/Qualify	C-4	FTX, MTP
Construct an Abatis	1/Inert/Qualify	C-4	FTX, MTP
Breach Obstacles (other than Minefields)	1/Inert/Qualify	C-4	FTX, MTP

Table 6–24
Training Year Events for Combat Heavy Engineer (TRC C) —Continued

Tasks	Freq	Munition/System	Event
Breach Obstacles (Wire Obstacle)	1/Live/Sustain/Biennial 1/Inert/Qualify	Bangalore	FTX, MTP
Breach Obstacles using Explosives	1/Live/Qualify 1/Inert/Sustain	C-4	
Install/Recover/Transfer a Hasty Protective Minefield	1/Inert/Qualify 1/Inert/Sustain	AT, AP Mines	FTX, MTP
Conduct Route Minesweep Operations	1/Inert/Qualify	AT, AP Mines	FTX, MTP
Disable LOC/Airfield With Explosives	1/Inert/Sustain	Shaped Charge, C-4 Crater Charge	FTX, MTP
Emplace a Tactical Minefield (Hornet)	1/Inert/Qualify	AT, Mines	FTX, MTP
Emplace a Minefield (row)	1/Inert/Sustain	AT, Mines	FTX, MTP
Breach Minefield with Explosives	1/Live/Qualify 1/Inert/Sustain		

Table 6–25
Annual Ammunition Requirements for Combat Heavy Engineer (TRC C)

Munition	DODIC	Bn	Sep Co
M15AT Mine	K180	0	0
M19AT Mine	K250	0	0
M21AT Mine	K181	0	0
Shaped Charge (15 or 40 lb.)	M420/421	12	3
Bangalore torpedo	M028	5	1
Cratering Charge (40 lb.)	M039	12	3
Demolitions—TNT (1 lb.)[1]	M032		
Demolitions—TNT (1/4 lb.)[1]	M030		
Demolitions—C-4 (1 1/4 lb.)[1]	M023	111	36
Detonating Cord (Ft)	M456	623	203
Igniter M81	MN08	900	80
Nonelectric Cap M11	ML47	936	256
Nonelectric Cap M12	MN02	72	32
Nonelectric Cap M13	MN03	36	16
Nonelectric Cap M14	MN06	468	48
Holder M9	ML45	504	117

Notes:
[1] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–26
Annual Individual Training for Combat Arms (TRC A)

Event	Freq
Demolitions[1]	
Construct MDI detonating assembly	
Prime explosives with MDI	4
Prime explosives with det cord	4
Mine Warfare Installation/Removal[2]	
M16AP Mine (Korea only)	4
M15AT Mine	4

Table 6–26
Annual Individual Training for Combat Arms (TRC A)—Continued

Event	Freq
M19AT Mine	4
M21AT Mine	4
US Antihandling Devices (Inert Only)	4

Notes:

[1] Frequency allows for 1 live-fire qualification exercise and 3 inert sustainment exercises.

[2] Frequency allows for 1 inert qualification exercise and 3 inert sustainment exercises.

Table 6–27
Annual Unit Training for Combat Arms (TRC A)

Tasks	Freq	Munition/System	Event
Breach Obstacle with Explosives	1/Live/Qualify 1/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP
(Infantry less Mechanized) Breach Obstacle (Wire Obstacle)	1/Live/Qualify 1/Inert/Sustain	Bangalore	FTX, MTP
(Mech Infantry, Armor, Armored Cav) Breach Obstacle (Wire Obstacle)	1/Inert/Qualify	Bangalore	FTX, MTP
Install/Recover/Transfer a Hasty Protective Minefield	1/Inert/Qualify 1/Inert/Qualify	AT, Mines	FTX, MTP
Emplace a Tactical Minefield (row)	1/Inert/Qualify 1/Inert/Qualify	AT, Mines	FTX, MTP
Emplace a Tactical Minefield (Scatterable)	1/Inert/Qualify 1/Inert/Sustain	MOPMS (M136)	FTX, MTP

Table 6–28
Annual Ammunition Requirements for Infantry[1] (TRC A)

Munitions	DODIC	Infantry Bn	Mech Infantry Bn
Demolitions—TNT(1 lb)[2]	M032		
Demolitions—TNT(1/4 lb)[2]	M030		
Demolitions—C-4 (11/4 lb)[2]	M023	1236	1236
Detonating Cord (Ft)	M456	8298	6798
Igniter M81	MN08	3380	2996
Nonelectric Cap M11	ML47	3380	2996
Nonelectric Cap M12	MN02	2028	1200
Nonelectric Cap M13	MN03	2028	1200
Nonelectric Cap M14	MN06	3380	2996
Bangalore torpedo	M028	30	0
Holder M9	ML45	3605	2797

Notes:

[1] Organic Scouts are included in the totals.

[2] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–29
Annual Ammunition Requirements for Armor[1]/Cavalry (TRC A)

Armor	Cav	AR	CAV	
Munitions	DODIC	Bn	Sqdn	Sep Co
Demolitions—TNT (1 lb.)[2]	M032			
Demolitions—TNT (1/4 lb.)[2]	M030			
Demolitions—C-4 (1 1/4 lb.)[2]	M023	123	742	371
Detonating Cord (Ft)	M456	348	2088	1044
Igniter M81	MN08	191	1164	582
Nonelectric Cap M11	ML47	191	1164	582
Nonelectric Cap M12	MN02	15	200	146
Nonelectric Cap M13	MN03	15	200	146
Nonelectric Cap M14	MN06	15	200	146
Holder M9	ML45	78	493	340

Notes:

[1] Resourcing is for Scouts only.

[2] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–30
Annual Individual Training Combat Arms (Armor, Armored Cavalry) (TRC C)

Event	Freq[1]
Demolition	
Construct MDI detonating assembly	
Prime explosives with MDI	3
Prime explosives with det cord	3
Mine Warfare Installation/Removal	
M16AP Mine (Korea only)	3
M15AT Mine	3
M19AT Mine	3
M21AT Mine	3
US Antihandling Devices (Inert Only)	3

Notes:

[1] Frequency allows for 1 inert qualification exercise and 2 inert sustainment exercises.

Table 6–31
Training Year Events for Combat Arms (Armor, Armored Cavalry) (TRC C)

Tasks	Freq	Munition/System	Event
Breach Obstacle With Explosives	1/Inert/Qualify	C-4	FTX, MTP
Breach Obstacle (Wire Obstacle 1)	1/Inert/Qualify	Bangalore	FTX, MTP
Install/Recover/Transfer a Hasty			
Protective Minefield	1/Inert/Qualify	AT, Mines	FTX, MTP
Emplace a Tactical Minefield (row)	1/Inert/Qualify	AT, Mines	FTX, MTP
Emplace a Tactical Minefield (Scatterable)	1/Inert/Qualify	MOPMS (M136)	FTX, MTP

Notes:

[1] Performed by all Infantry and Armor/Cavalry Units.

Table 6–32
Annual Ammunition Requirements for Infantry[1] (TRC C, CAT I)

Infantry	Mech Infantry	
Munitions	DODIC	Bn
Demolitions—TNT (1 lb)[1]	M032	
Demolitions—TNT (1/4 lb)[1]	M030	
Demolitions—C-4 (1 1/4 lb)[1]	M023	0
Detonating Cord (Ft)	M456	NO LIVE FIRE
Fuze Ignitor M81	MN08	NO LIVE FIRE
Nonelectric Cap M11	ML47	NO LIVE FIRE
Nonelectric Cap M12	MN02	NO LIVE FIRE
Nonelectric Cap M13	MN03	NO LIVE FIRE
Nonelectric Cap M14	MN06	NO LIVE FIRE
Bangalore torpedo	M028	
Holder M9	ML45	

Notes:

[1] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

[2] Conduct inert training, live fire is a postmobilization requirement.

Table 6–33
Annual Individual Training for Chemical Units (TRC A)

Event	Freq[1]
Demolitions	
Construct MDI detonating assembly	4
Prime explosives with MDI	4
Prime explosives with det cord	4

Notes:

[1] Frequency allows for 1 live-fire qualification exercises and 3 inert sustainment exercises.

Table 6–34
Annual Unit Training for Chemical Units (TRC A)

Tasks	Freq	Munition/System	Event
Exploding Flame Landmine	1/Live/Qualify 1/Inert/Sustain	C-4	LFX, CALFEX MTP
55 Gallon Flame Fugas	1/Live/Qualify 1/Inert/Sustain	C-4	FTX, MTP
55 Gallon Landmine (Nondirectional)	1/Live/Qualify 1/Inert/Sustain	C-4	FTX, MTP
Hasty Emplacement (Wall of Flame)	1/Live/Qualify 1/Inert/Sustain	C-4	FTX, MTP
Employ a HUSCH Flare	1/Live/Qualify 1/Inert/Sustain	M-4	LFX, CALFEX FTX, MTP

Table 6–35
Annual Ammunition Requirements for Chemical Company (TRC A)

Munition	DODIC	Co
M-4 Burster	K010	24
M49 Trip Flare	L495	42
M-4 Fuel Thickening Compound	K917	108 lbs
Demolitions—TNT (1 lb.)[1]	M032	
Demolitions—TNT (1/4 lb.)[1]	M030	
Demolitions— C-4 (1 1/4 lb.)[1]	M023	120
Detonating Cord (FT)	M456	3072
Igniter M81	MN08	432
Nonelectric Cap M11	ML47	432
Nonelectric Cap M12	MN02	30
Nonelectric Cap M13	MN03	30
Nonelectric Cap M14	MN06	0
Holder M9	ML45	164

Notes:
[1] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–36
Annual Individual Training for Chemical Units (TRC C)

Event	Freq[1]
Demolitions	
Construct MDI detonating assembly	3
Prime explosives with MDI	3
Prime explosives with det cord	3

Notes:
[1] Frequency allows for 1 inert fire qualification exercises and 2 inert sustainment exercises.

Table 6–37
Training Year Events for Chemical Units (TRC C)

Tasks	Freq	Munition/System	Event
Exploding Flame Landmine	1/Inert/Qualify 1/Inert/Sustain	C-4	LFX, CALFEX MTP
55 Gallon Flame Fugas	1/Inert/Qualify 1/Inert/Sustain	C-4	FTX, MTP
55 Gallon Landmine (Nondirectional)	1/Inert/Qualify 1/Inert/Sustain	C-4	FTX, MTP
Hasty Emplacement (Wall of Flame)	1/Inert/Qualify 1/Inert/Sustain	C-4	FTX, MTP
Employ a HUSCH Flame	1/Inert/Qualify 1/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP

Table 6–38
Annual Individual Training for Ordnance Units (TRC A)

Event	Freq[1]
Demolitions	
Construct MDI detonating assembly	4
Prime explosives with MDI	4
Prime explosives with det cord	4

Notes:
[1] Frequency allows for 1 live-fire qualification exercises and 3 inert sustainment exercises.

Table 6–39
Annual Unit Training for Ordnance Units (TRC A)

Tasks	Freq	Munition/System	Event
Emergency Destruction of Ammunition by Detonation	1/Live/Qualify 1/Inert/Sustain	Shaped Charges	LFX, CALFEX MTP

Table 6–40
Annual Ammunition Requirements for Ordnance Company (TRC A)

Munition	DODIC	Co
Demolitions-TNT (1 lb.)[1]	M032	
Demolitions-TNT (1/4 lb.)[1]	M030	
Demolitions-C-4 (1 1/4 lb.)[1]	M023	165
Detonating Cord (FT)	M456	1345
Ignitre M81	MN08	345
Nonelectric Cap M11	ML47	345
Nonelectric Cap M12	MN02	172
Nonelectric Cap M13	MN03	345
Nonelectric Cap M14	MN06	0
Holder M9	ML45	287
Shaped Charges (15 or 40 lb)	M420	1

Notes:
[1] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–41
Annual Individual Training for Ordnance Units (TRC C)

Event	Freq[1]
Demolitions	
Construct MDI detonating assembly	3
Prime explosives with MDI	3
Prime explosives with det cord	3

Notes:
[1] Frequency allows for 1 inert qualification exercises and 2 inert sustainment exercises.

Table 6–42
Training Year Events for Ordnance Units (TRC C)

Tasks	Freq	Munition/System	Event
Emergency Destruction of Ammunition by Detonation	1/Inert/Qualify 1/Inert/Sustain	Shaped Charge	MTP

Table 6–43
Annual Individual Training for EOD Detachments/Teams (TRC A)

Event	Freq
Demolitions	
Construct MDI detonating assembly	4[1]
Prime explosives with MDI	4[1]
Prime explosives with det cord	4[1]
EOD Procedures	
Nonelectric firing assembly Rocket Wrench/Cal .50 Dearmer	8[2]
Electric firing assembly Rocket Wrench/Cal .50 Dearmer	8[2]
Fire Cutter, HE MK 23 Mod 0 and MK 24 Mod 0 EXROD	4[3]

Notes:

[1] Frequency allows for 2 live-fire qualification exercises and 2 live sustainment exercises.

[2] Frequency allows for 2 live-fire qualification exercises per tool and 2 inert sustainment exercises per tool.

[3] Frequency allows for 2 live-fire qualification and 2 inert sustainment exercises. Alternate MK # EXROD every 6 months.

Table 6–44
Annual Unit Training for EOD Detachments/Teams (TRC A)

Tasks	Freq	Munition/System	Event
Render Safe/Disposal Procedures	1/Live/Qualify 1/Live/Sustain	C-4	LFX, CALFEX FTX, MTP
Rocket Wrench, Electric	2/Live/Qualify 2/inert/Sustain	CTG Impulse .50 cal	LFX, CALFEX FTX, MTP
Rocket Wrench, Nonelectric	2/Live/Qualify 2/inert/Sustain	CTG .50 cal Ball M2	LFX, CALFEX FTX, MTP
Cal .50 Dearmer—Electric	2/Live/Qualify 2/inert/Sustain	CTG Impulse .50 cal	LFX, CALFEX FTX, MTP
Cal .50 Dearmer—Nonelectric	2/Live/Qualify 2/inert/Sustain	CTG .50 cal Ball M2	LFX, CALFEX FTX, MTP
Cutter HE MK	2/Live Qualify 2/inert/Sustain	Cutter HE MK 23 Mod 0 EXROD Cutter HE EXROD 24 Mod 0 EXROD	LFX, CALFEX FTX, MTP

Table 6–45
Annual Ammunition Requirements for EOD Companies/Teams (TRC A)

Munition	DODIC	Company
EXROD MK23 MOD O/MK24 MOD O	ML04/ML05	10
Linear Shaped Charge, Flex 225 gr/ft	ML15	20
Demolitions-TNT(1 lb.)	M032	
Demolitions-TNT(1/4 lb.)	M030	

Table 6–45
Annual Ammunition Requirements for EOD Companies/Teams (TRC A)—Continued

Munition	DODIC	Company
Demolitions-C-4(1-1/4 lb.)[1]	M023	80
Detonating Cord (FT)	M456	1000
Time or Safety Fuze (FT)	M670	1150
Fuze Ignitor	M766	150
Electric Cap	M130	54
Nonelectric Cap	M131	160
CTG, Impulse .50 cal	M174	120
CTG, .50 cal Ball	A552	120
EOD use of MDI		
Igniter M81	MN08	150
Nonelectric Cap M11	ML47	120
Nonelectric Cap M12	MN02	40
Nonelectric Cap M13	MN03	40
Nonelectric Cap M14	MN06	120
Holder M9	ML45	106

Notes:

[1] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–46
Annual Individual Training for EOD Companies/Teams (TRC C)

Event	Freq
Demolitions	
Construct MDI detonating assembly Prime explosives with MDI	2[1]
Electric detonating assembly Prime explosives electrically	2[1]
Prime explosives with det cord	2[1]
EOD Procedures	
Nonelectric firing assembly Rocket Wrench/Cal .50 Dearmer	4
Electric firing assembly Rocket Wrench/Cal .50 Dearmer	4[2]
Fire the Cutter HE MK 23 Mod O and MK 24 Mod O EXROD	2[3]

Notes:

[1] Frequency allows for 1 live-fire qualification exercise and 1 inert sustainment exercise.

[2] Frequency allows for 1 live-fire qualification exercise per tool and 1 inert sustainment exercise per tool.

[3] Frequency allows for 1 live-fire qualification and 1 inert sustainment exercise. Alternate MK # EXROD every training year.

Table 6–47
Annual Unit Training for EOD Companies/Teams (TRC C)

Tasks	Freq	Munition/System	Event
Render Safe/Disposal Procedures	1/Live/Qualify 1/Inert/Sustain	C-4	LFX, CALFEX FTX, MTP
Rocket Wrench, Electric	1/Live/Qualify 1/inert/Sustain	CTG Impulse .50 cal	LFX, CALFEX FTX, MTP
Rocket Wrench, Nonelectric	1/Live/Qualify 1/inert/Sustain	CTG cal .50 Ball M2	LFX, CALFEX FTX, MTP

Table 6–47
Annual Unit Training for EOD Companies/Teams (TRC C)—Continued

Tasks	Freq	Munition/System	Event
Cal .50 Dearmer—Electric	1/Live/Qualify 1/inert/Sustain	CTG Impulse .50 cal	LFX, CALFEX FTX, MTP
Cal .50 Dearmer—Nonelectric	1/Live/Qualify 1/inert/Sustain	CTG .50 cal Ball M2	LFX, CALFEX FTX, MTP
Cutter HE EXROD	1/Live Qualify 1/inert/Sustain	Cutter HE MK 23 Mod 0 EXROD Cutter HE MK 23 Mod 0 EXROD	LFX, CALFEX FTX, MTP

Table 6–48
Annual Ammunition Requirements for EOD Companies /Teams(TRC C)

Munition	DODIC	Company
EXROD MK23 MOD O/MK24 MOD O	ML04/ML05	5
Linear Shaped Charge, Flex 225 gr/ft	ML15	10
Demolitions-TNT(1 lb.)	M032	
Demolitions-TNT(1/4 lb.)	M030	
Demolitions-C-4(1 1/4 lb.)[1]	M023	40
Detonating Cord (FT)	M456	500
Time or Safety Fuze (FT)	M670	575
Fuze Ignitor	M766	75
Electric Cap	M130	27
Nonelectric Cap	M131	80
CTG, Impulse .50 cal	M174	60
CTG, .50 cal Ball	A552	60
EOD use of MDI		
Ignitor M81	MN08	75
Nonelectric Cap M11	ML47	60
Nonelectric Cap M12	MN02	20
Nonelectric Cap M13	MN03	20
Nonelectric Cap M14	MN06	60
Holder M9	ML45	54

Notes:
[1] If C-4 is not available, substitute TNT. Quantity should be calculated using the multiplier 1.34 relative effectiveness factor. Calculate the quantity of TNT needed by multiplying the quantity of C-4 by 1.34 (relative effectiveness factor). The result should be rounded up to the nearest 1/4-pound package size. This table combines individual and unit demolition quantities.

Table 6–49
Annual Individual Training for Diving Detachments/Teams (TRC A)

Event	Freq[1]
Demolitions	
Prime explosives with MDI	4
Prime explosives with det cord	4

Notes:
[1] Frequency allows for 2 live-fire qualification exercises and 2 inert sustainment exercises.

Table 6–50
Annual Unit Training for Diving Detachments /Teams (TRC A)

Tasks	Freq	Munition/System	Event
Clear Underwater Obstacles Using Demolitions	2/Live/Qualify 2/Inert/Sustain	C-4	LFX FTX, MTP

Table 6–51
Annual Ammunition Requirements for Diving Detachments/Teams (TRC A)

Munition	DODIC	Detachment
Demolitions—C-4 (1 1/4 lb.)	M023	34
Detonating Cord (FT)	M456	3400
Igniter M81	MN08	136
Nonelectric Cap M11	ML47	136
Nonelectric Cap M12	MN02	136
Nonelectric Cap M13	MN03	136
Nonelectric Cap M14	MN06	136
Holder M9	ML45	181

Table 6–52
Annual Individual Training for Diving Detachments /Teams (TRC C)

Event	Freq[1]
Demolitions	
Prime explosives with MDI	3
Prime explosives with det cord	3

Notes:

[1] Frequency allows for 1 live-fire qualification exercises and 2 inert sustainment exercises.

Table 6–53
Training Year Events for Diving Detachments/Teams (TRC C)

Tasks	Freq	Munition/System	Event
Clear Underwater Obstacles Using Demolitions	1/Live/Qualify 2/Inert/Sustain	C-4	LFX FTX, MTP

Table 6–54
Training Year Ammunition Requirements for Diving Detachments/Teams (TRC C)

Munition	DODIC	Detachment
Demolitions—C-4 (1 1/4 lb)	M023	17
Detonating Cord (FT)	M456	1700
Igniter M81	MN08	34
Nonelectric Cap M11	ML47	34
Nonelectric Cap M12	MN02	34
Nonelectric Cap M13	MN03	34
Nonelectric Cap M14	MN06	34
Holder M9	ML45	45

Table 6–55
Annual Individual Training for Other Engineers, Other Cbt Arms and CS/CSS (TRC A/C)

Mine Warfare Installation/Removal	Freq	A[1]	C[2]
M15AT Mine	1	4	3
M19AT Mine	1	4	3
M21AT Mine	1	4	3
US Antihandling Devices (Inert Only)	1	4	3

Notes:
[1] Frequency allows for 1 inert qualification exercise and 3 inert sustainment exercises.
[2] Frequency allows for 1 inert qualification exercise and 2 inert sustainment exercises.

Table 6–56
Annual Unit Training for Other Engineer, Other Cbt Arms and CS/CSS (TRC A/C)

Tasks	Freq	Munition/System	Event
Install/Recover/Transfer a Hasty Protective Minefield	1/Inert/Qualify	AT, AP Mines	FTX, MTP
Emplace a Tactical Minefield (Hornet)	1/Inert/Qualify	AT, AP Mines	FTX, MTP
Emplace a Tactical Minefield (row)	1/Inert/Qualify	AT, AP Mines	FTX, MTP

Notes:
[1] Ammunition is for training year in the TRC C units.

Chapter 7
Aviation Weapon Systems

Section I
Introduction

7–1. Standards, strategies, and requirements

a. This chapter provides weapon standards, training strategies, and resource requirements for units equipped with the AH-64, AH-1, UH-1, UH-60, CH-47 and OH-58D (I). The training programs provided have been designed for each weapon system and training readiness condition (TRCs A and C). Each program contains a standard and strategy that outlines the training sequence and includes suggested frequencies of live fire and use of devices.

b. The objective is to assist field commanders in attaining and sustaining their standards by TRC.

c. The training strategies in this chapter are based on exercises in current TCs, FMs, MTPs and ARTEPs. FM 1-140 contains the requirements for gunnery qualification. The specifics of each exercise are not presented in this pamphlet.

7–2. Training devices

a. General. Aviation relies on simulators and other training devices to train and sustain critical individual and collective tasks. Actual equipment and training ammunition is used to assess combat readiness at the individual, crew, and collective levels. The training strategy combines service (CALFEX) and training ammunition (Gunnery Tables) with devices and simulators to provide the comprehensive helicopter gunnery training program.

b. Objective. Training devices aid assessment and enhance and sustain skills while training in garrison or local training areas.

c. Device list. The following devices are an integral part of the training strategies. Full caliber ammunition allocations are based on their use as presented in the strategies.

(1) AH-1 flight weapons simulator (FWS).

(a) The AH-1 FWS provides training capability for flight and weapons delivery, normal and emergency procedures and operational tasks required in the aircraft. The device consists of two crew stations mounted on separate motion platforms. An instructor station is available in either crew station.

(b) The original visual system using a high resolution laser scan and model board system has been upgraded. The upgraded digital imagery generation system (DIGS) uses computer imagery throughout the system for both "out the window" and thru-sight visuals. The pilot and copilot/gunner have the capability to train individually or as an integrated crew. The AH-1 FWS will support weapon system training for all weapons on the AH-1E and AH-1F.

(2) AH-64 combat mission simulator (CMS).

(a) The AH-64 CMS provides a training capability for flight and weapon delivery, normal and emergency procedures, and sensor system operating tasks required in the operational design of the AH-64 helicopter. The device consists of two crew stations mounted on separate motion platforms. An instructor station is available in either crew station.

(b) The pilot and copilot/gunner have the capability to train individually or as a crew performing an integrated combat mission using all weapon systems. The AH-64 CMS will support weapon system training for all weapons on the AH-64A.

(3) AH-64 cockpit, weapons and emergency procedures trainer (CWEPT). The CWEPT provides training for AH-64 pilots and copilot/gunners. This device is a non-motion simulator used for normal procedural training and simulated emergency conditions. The CWEPT simulates all sighting systems present on the AH-64 aircraft. Weapon systems engagement training may be simulated for the Hellfire missile, 2.75 inch aerial rocket system, and the 30-mm cannon. Currently the CWEPT is used to train individuals who are undergoing AH-64 transition qualification. The Apache crew trainer (ACT) is an upgraded version of the CWEPT. It is a non-motion simulator with improvement to the visual data base. It is the next generation of procedural trainer for flight and weapon system employment.

(4) Aerial weapons scoring system (AWSS). The AWSS is an integrated system of computer-controlled sensors used to score live-fire helicopter gunnery exercises. This objective scoring system allows the commander to validate training standards, ensure training effectiveness, and substantiate training ammunition resource levels. The system uses acoustical sensors to score 2.75-inch rocket impacts and a Doppler radar system to score cannon and machine-gun fire. A computer subsystem processes sensor data and provides scoring reports. An engineering change proposal (ECP) will provide objective scoring of Hellfire missile engagements using the Hellfire training missile, the aircraft laser and standard range targets.

(5) *MILES/AGES.* The MILES/AGES is a force-on-force training device that allows simulated air-to-ground and air-to-air engagements from actual aircraft. It uses eye-safe lasers and computers to assess proficiency during force-on-force training exercises. MILES provides immediate casualty assessment. MILES simulates actual aircraft systems and allows units to conduct operations as they would in combat. It also provides an objective after-action review capability.

(6) *Hellfire dummy missile.* The Hellfire dummy missile assists individual and crew sustainment flight and gunnery training by providing a realistic method to practice rearming and flight operations with the aircraft at combat weights.

(7) *Hellfire training missile (HTM).* The HTM allows crews to train Hellfire engagement procedures without the expenditure of a live Hellfire missile. The HTM allows the crew to search, acquire, and simulate missile firing modes. The HTM provides the flight crew most of the pertinent tactical missile functions as an actual missile. The HTM may be used with or without an actual laser.

(8) *Captive Flight Trainer (CFT).* The CFT allows flight crews to practice air-to-air Stinger missile engagements by providing all pre-launch indications of an actual missile. The CFT is a live missile without the launch motor, flight motor, and warhead. By using actual missile components, the system gives realistic cockpit indications (aural and visual) of seeker head spin up/cool down, acquisition, and tracking reticles and missile lock-on target.

(9) *Field handling trainer (FHT).* The FHT replicates the weight and physical appearance of an actual air-to-air Stinger missile. The FHT allows an aircrew to experience flight conditions similar to those encountered while flying with actual air-to-air Stinger missiles. It also allows armament personnel to practice loading and downloading procedures. The FHT does not provide any electronic or cockpit displays.

(10) *TADS selected task trainer (TSTT).* The TSTT is a fully functional mock-up of the front crew station of the AH-64A Apache. It is a non-motion procedural trainer that provides all copilot/gunner (CP/G) switchology and procedural step training for weapon system employment.

Section II
Training Programs

7–3. Development

a. Training programs have been developed for each TRC level and are indexed for cross reference at table 7-1. The standard is stated at the beginning of each program and is accompanied by a training strategy (table) that identifies training events and ammunition requirements. Individual training requirements are given first, followed by crew, team, and unit. Proficiency is achieved through the use of devices, dry-fire, and live-fire exercises.

b. To achieve crew level qualification as required by the STRAC standard, the crew qualification table (Table VI—Validation or Table VIII) will be live fired and scored objectively. The AWSS, or comparable DA-approved scoring system, will be requested and used to score crew qualifications. If high-explosive service ammunition is issued in lieu of training ammunition (for example ammunition shortages and lot suspensions), the AWSS scoring system cannot be used. When using service ammunition, units should subjectively score the range.

c. These programs were developed on the assumption that training events will be evenly spaced throughout the training year. Resource availability (such as ranges) may allow a commander more live fire opportunities of shorter duration. In this case, not all crews or teams in the battalion will train at each opportunity.

7–4. Purpose and objectives of the training programs

Training programs provide a method to attain and sustain weapon proficiency throughout the training year. They ensure that all crews, platoons and companies in a battalion are adequately trained and able to sustain weapon proficiency.

7–5. Programs for the AH-64A

a. TRC A.

(1) *Standard.* Eighty-five percent of a company's assigned aircrews must be crew qualified and must have completed team/platoon or company/troop tables within the past 12 months.

(2) *Training Strategy.* The crew training strategy and ammunition requirements are given in table 7-2.

b. TRC C.

(1) *Standard.* Eighty-five percent of the assigned aircrews must have completed crew qualification within the past training year.

(2) *Training Strategy.* The crew training strategy and ammunition requirements are given in table 7-3.

7–6. Programs for the AH-1E and AH-1F

a. TRC A (AH-1E and AH-1F).

(1) *Standard.* Eighty-five percent of a company's assigned aircrews must be crew qualified and must have completed team/platoon or company/troop tables within the past 12 months.

(2) *Training strategy.* The crew training strategy and ammunition requirements are given in tables 7-4 for the AH-1E and AH-1F.

b. TRC C (AH-1E and AH-1F).

(1) *Standard.* Eighty-five percent of the assigned aircrews must have completed crew qualification within the past 12 months.

(2) *Training strategy.* The crew training strategy and ammunition requirements for the AH-1E and AH-1F are given in table 7-5.

7–7. Programs for door gunnery (UH-1H, UH-60, and CH-47)

a. TRC A.

(1) *Standard.* Ninety percent of the assigned M60D gunners must have completed qualification in accordance with TC 1-140 and Table X within the past 12 months.

(2) *Training strategy.* The crew training strategies and ammunition requirements are given in table 7-6.

b. TRC C.

(1) *Standard.* Ninety percent of the assigned M60D gunners must have completed qualification in accordance with TC 1-140 within the past 12 months.

(2) *Training strategy.* The training strategy and ammunition requirements are given in table 7-6.

7–8. Programs for the OH-58D (I)

a. TRC A.

(1) *Standard.* Eighty-five percent of a company's assigned aircrews must be crew qualified and must have completed team/platoon or company/troop tables within the past 12 months.

(2) *Training strategy.* The crew training strategy and ammunition requirements are given in table 7-7.

b. TRC C.

(1) *Standard.* Eighty-five percent of the assigned aircrews must have completed crew qualification within the past 12 months.

(2) *Training strategy.* The crew training strategy and ammunition requirements are given in table 7-8.

Table 7–1
Aviation Weapon Systems Training Index

Weapon System	Paragraph	Table
Branch Specific Weapon Systems		
AH-64	7-5	7-2, 7-3
AH-1E/AH-1F	7-6	7-4, 7-5
UH-1 (Door Gunnery)	7-7	7-6
UH-60 (Door Gunnery)	7-7	7-6
CH-47 (Door Gunnery)	7-7	7-6
OH-58D (Armed)	7-8	7-7, 7-8
Other Weapon Systems		
AT-4	5-6	5-24
Rifle (M-16A1/A2)	5-9	5-39
Grenade Launcher (M203)	5-9	5-44
Machine Gun (M60/240B)	5-8	5-30
Machine Gun (M2 HB)	5-8	5-33
Pistol	5-9	5-45
Hand Grenades (M228/M67)	5-9	5-48
Claymore Mine (M18A1)	5-9	5-50
Volcano	6-24	

Table 7–2
Annual Training Strategy and Ammunition, AH-64 Units (TRC A)

EVENT	TABLE	FREQ	HOW/LEVEL	2.75/ M274	2.75/ M267	Hellfire	30-mm	Hoffman	ATWESS[5]
DODIC				H972	H463	PA79	B120	L602	L367
Cdr's	III-IV	1	CMS/Ind						
CMS		12							
TSTT		4							
HGST[2]	V	1	FM 1-140						
Cal/Ver	VI	1	Live/Sys	12			150		
Crew	VII	1	Live/Crew	32	8		200	25	
Crew	VIII	1	Live/Crew	32	8		200	25	
Team[3,4]	X	1	Live/PLT—Team	8		1[1]	180	10	
Co[3,4]	XII	1	Live/Co—Troop	8	6		150	15	
FTX		3							27
Total, Airframe				92	22		880	75	81
BN X 24 Aircraft				2208	528		21,120	1,800	1,944

Notes:
[1] When available, stockpile reliability, surveillance/stock rotation round will be used, as rounds will not be resourced.
[2] Prior to live fire.
[3] One engagement will be conducted under MOPP-4 conditions in accordance with ATM standards.
[4] Unit commanders will determine ammunition distribution for advanced table events based on unit training needs.
[5] ATWESS are resourced in support of MILES/AGES training.

Table 7–3
Annual Training Strategy and Ammunition, AH-64 Units (TRC C)

EVENT	TABLE	FREQ	HOW/LEVEL	2.75/M274	2.75/M267	Hellfire	30MM	Hoffman	ATWESS[3]
DODIC				H972	H463	PA79	B120	L602	L367
Cdr's	III-IV	1	CMS/Ind						
CMS		4							
TSTT		4							
HGST[2]	V	1	FM 1-140						
Cal/ Ver.	VI	1	Live/Sys	12			150		
Crew	VII	1	Live/Crew	32	8		200	25	
Crew	VIII	1	Live/Crew	32	8	1[1]	200	25	
FTX		3							27
Total, Airframe				76	16		550	50	81
BN X 24 Aircraft				1824	384		13,200	1,200	1,944

Notes:
[1] When available, stockpile reliability, surveillance/stock rotation round will be used, as rounds will not be resourced.
[2] Prior to live fire.
[3] ATWESS are resourced in support of MILES/AGES training.

Table 7–4
Annual Training Strategy and Ammunition, AH-1 Units (TRC A)

EVENT	TABLE	FREQ	HOW/LEVEL	2.75	2.75	TOW	20MM	Hoffman	ATWESS[1]
DODIC				H972 /M274	H463 /M267	PV04	A896	L602	L367
Cdr's	III-IV	1	FWS/Ind						
FWS		2							
HGST[2]	V	1	FM 1-140						
Cal/ Ver	VI	1	Live/Sys	6			128		
Crew	VII	1	Live/Crew	34	8		510	25	
Crew	VIII	1	Live/Crew	34	8	1	510	25	
Team[3,4]	X	1	Live/PLT—Team	10			200	10	
Co[3,4]	XII	1	Live/Co—Troop	10			200	15	
FTX		3							27
Total, Airframe				94	16	1	1548	75	81
SQDN X 8 Aircraft				752	128	8	12,384	600	648
BN X 24 Aircraft				2256	384	24	37,152	1,800	1,944

Notes:
[1] ATWESS are resourced in support of MILES/AGES training.
[2] Prior to live fire.
[3] One engagement will be conducted under MOPP-4 conditions in accordance with ATM standards. Unit commanders will determine ammunition distribution for advanced table events based on unit training needs.

Table 7–5
Annual Training Strategy and Ammunition, AH-1 Units (TRC C)

EVENT	TABLE	FREQ	HOW/LEVEL	2.75	2.75	TOW	20MM	Hoffman	ATWESS[1]
DODIC				M274/H972	M267/H463	PV04	A896	L602	L367
Cdr's	III-IV	1	FWS/IND						
FWS		2							
HGST[2]	V	1	FM 1-140						
Cal/Ver	VI	1	Live/Sys	6			128		
Crew	VII	1	Live/Crew	34	8		510	25	
Crew	VIII	1	Live/Crew	34	8	1	510	25	
FTX		3							27
Total, Airframe				74	16		1148	50	81
SQDN X 8 Aircraft				592	128	8	9,184	400	648
BN X 24 Aircraft				1,776	384	24	27,552	1,200	1,944

Notes:
[1] ATWESS are resourced in support of MILES/AGES training.
[2] Prior to live fire.

Table 7–6
Annual Training Strategy and Ammunition, Door Gunnery (UH-1, UH-60, CH-47), 7.62-mm

EVENT	TABLE	BALL	MIX	BLANK	FREQ TRC A	FREQ TRC C
DODIC		A143	A131	A111		
10 Meter Practice Fire[1]	I	117			1	1
10 Meter Record Fire[1]	II	119			1	1
Transition Practice[1,4]	III		182		1	1
Record Fire[1]	IV		154		1	1
Door Gunnery	V		Dry Fire		1	1
Aircraft Transition	VI		150		1	1
Aircraft Practice	VII		240		1	1
Aircraft Qualification	VIII		240		1	1
PLT/CO FTX				200	1	1
ARTEP				200	1	1
Section/Platoon Training (MILES)	IX			200	1	0
Section/Platoon Training (Live-fire)	X		200		1	0
TOTALS, TRC A		236	1166	600		
TOTAL, TRC C		236	966	400		

Notes:
[1] Event found in FM 23-67.
[2] Table V-X are found in FM 1-140.
[3] Table reflects authorization for one gunner position per aircraft. Total rounds per aircraft double for authorized second gunner position.
[4] NBC fire is integrated into transition events (FM 23-67).

Table 7–7
Annual Training Strategy and Ammunition, OH-58D(I) (TRC A)

EVENT	TABLE	FREQ	HOW/LEVEL	2.75	2.75	Hellfire/ Stinger[3]	.50 CAL	Hoffman	ATWESS[2]
DODIC				M274/H972	M267/H463	PA79/PL90	A557	L602	L367
Cdr's	III-IV	1	Live/Indiv	20	8		320	20	
HGST	V	1	FM 1-140						
Cal/Ver	VI	1	Live/Sys	7			40		
Crew	VII	1	Live/Crew	19	7		560	25	
Crew	VIII	1	Live/Crew	19	7		560	25	
Team[1]	X	1	Live/PLT—Team	14		1 Hellfire/ 1 Stinger[3]	480	10	
Co[1]	XII	1	Live/Co—Troop	14			480	15	
FTX		3							27
Total, Airframe				93	22		2440	95	81
SQDN X 8 Aircraft				744	176		19,520	760	648
BN X 24 Aircraft				2,232	528		58,560	2,280	1,944

Notes:
[1] Unit commanders will determine ammunition distribution for advanced table events based on unit training needs.
[2] ATWESS are resourced in support of MILES/AGES training.
[3] Hellfire/Stinger rounds will not be resourced. When available, stockpile reliability surveillance/stock rotation round will be used.

Table 7–8
Annual Training Strategy and Ammunition, OH-58D(I) (TRC C)

EVENT	TABLE	FREQ	HOW/LEVEL	2.75	2.75	Hellfire/ Stinger[2]	.50 CAL	Hoffman	ATWESS[1]
DODIC				M274/H972	M267/H463	PA79/PL90	A557	L602	L367
Cdr's	III-IV	1	LIVE/Indiv	20	8		320	20	
HGST	V	1	FM 1-140						
Cal/Ver.	VI	1	Live/Sys	7			40		
Crew	VII	1	Live/Crew	19	7		560	25	
Crew	VIII	1	Live/Crew	19	7	1 Hellfire/ 1 Stinger[2]	560	25	
FTX		3							27
Total, Airframe				65	22		1480	70	81
SQDN X 8 Aircraft				520	176		11,840	560	648
BN X 24 Aircraft				1,560	528		35,520	1,680	1,944

Notes:
[1] ATWESS are resourced in support of MILES/AGES training.
[2] Hellfire/Stinger rounds will not be resourced. When available, stockpile reliability surveillance/stock rotation round will be used.

Chapter 8
Pyrotechnics

8–1. Introduction

a. This chapter provides the annual pyrotechnic training requirements for specific units. The tables at the end of this chapter provide the total training requirements and notional training strategies by type unit. The notional training strategies listed in the other chapters of this pamphlet do not necessarily coincide with those reflected in this chapter, due to ammunition constraints.

b. The objective of this chapter is to assist ammunition managers in forecasting pyrotechnic requirements and to provide guidance for the unit trainer in the suggested authorization of pyrotechnics for specific types of training exercises.

c. Existing ARTEPs and MTPs were considered in the development of the following pyrotechnic requirements. Units were grouped according to like-type training missions and the intensity and/or frequency of field training in which they would be expected to participate. This resulted in the following unit groupings:

(1) Group I.
(a) Armor.
(b) Infantry.
(c) Cavalry.
(2) Group 2
(a) Air Defense Artillery.
(b) Aviation.
(c) Combat Engineer.
(d) Field Artillery.

(e) Military Police.
(f) Chemical Units.
(3) Group 3
(a) Adjutant General.
(b) Finance.
(c) Medical.
(d) Military Intelligence.
(e) Ordnance.
(f) Other Engineer.
(g) Quartermaster.
(h) Signal.
(i) Transportation.
(j) Transportation Aviation maintenance units.
(k) USAR training battalion (TRC D).

8–2. Resourcing

a. Units are resourced as shown in the following tables to support typical field exercises at different TRC levels. The annual frequency of each event is indicated at the bottom of each table. Commanders may desire to use more or less pyrotechnics than what is indicated for a particular level of exercise. However, the total annual requirement that a unit may receive, as shown in the far right column, will not be exceeded during the training year. For the purpose of standardization in calculation only, each battalion is counted as having four companies and each company with three platoons. Headquarters and Echo Companies are considered in the total battalion allocation as are opposing forces (OPFOR) requirements and any attachments (such as Engineers). Pyrotechnic requirements for NTC have been resourced separately and are not a part of the unit's annual requirements. Chemical units are resourced as indicated in tables 8-13 and 8-14. Explosive ordnance disposal detachments and control teams are resourced as indicated in table 8-19.

b. Specialized pyrotechnics such as Hoffman charges, ATWESS charges, M80 blast simulators and vehicle launched smoke grenades are listed with the weapon system to which they pertain.

8–3. Requirements

Pyrotechnic requirements are listed in tables 8-1 through 8-19. Units classified as USAR training battalions should use table 8-18. To calculate pyrotechnic requirements for the year, the unit identifies its group, as outlined in paragraph 8-1c, determines its TRC, and consults the appropriate table. Separate companies are defined as those not part of a TOE battalion or required to separate in an isolated manner due to geographical location. Requirements shown in the far right column of the table are the total annual requirements for the battalion or separate company. Unit trainers must subdivide these resources among their subordinate units as the training situation dictates.

Table 8–1
Annual Pyrotechnic Requirements Group 1: IN/AR Battalion (TRC A)

		FTX			LFX	Annual
DODIC	Nomenclature	Bn	Co	Plt	Co	Rqmt
G963	Gren Smk CS	3	1	1	0	32
G930	Gren Smk HC	9	4	2	1	62
G940	Gren Smk Green	9	5	2	1	66
G945	Gren Smk Yellow	11	5	3	0	114
G950	Gren Smk RED	5	2	1	0	42
G955	Gren Smk VIOL	10	3	1	0	56
K768	Riot Control Agent CS	0	1	0	0	4
K867	Smk Pot Flt, M4A2	3	0	0	0	6
L305	Sig Illum GREEN Para	3	1	1	0	34
L306	Sig Illum RED Para	3	1	1	2	40
L307	Sig Illum WHITE Para	4	2	1	0	40
L311	Sig Illum RED Star	3	0	1	0	30
L312	Sig Illum WHITE Star	5	2	1	0	42
L314	Sig Illum GREEN Star	7	2	2	1	64
L495	Flare Surface Trip	9	3	1	0	54
L594	Sim Proj Gnd Brst	30	12	8	0	300
L595	Sim Proj Air Burst Liq (SPAL), M9	1[3]	0	0	0	2
L596	Sim Arty Gun Flash	4	2	1	0	38
L598	Sim Booby trap Flash	6	2	1	1	36
L599	Sim Booby trap Illum	6	3	1	0	48
L600	Sim Booby trap Whis	11	4	2	0	62
L601	Sim Hand Gren	30	12	8	0	220
Freq		2	1	2	1	

Notes:

[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.

[2] OPFOR requirements are included in this table.

[3] Denotes one kit of 20 each simulators.

Table 8–2
Annual Pyrotechnic Requirements Group 1: IN/AR Battalion (TRC B/C)

		FTX			LFX	Annual
DODIC	Nomenclature	Bn	Co	Plt	Co	Rqmt
G930	Gren Smk HC	9	4	2	2	57
G940	Gren Smk GREEN	15	5	2	1	63
G945	Gren Smk YELLOW	15	4	3	0	67
G950	Gren Smk RED	5	2	1	0	25
G955	Gren Smk VIOL	5	2	1	0	25
G963	Gren Smk CS	7	2	1	0	27
K768	Riot Control Agent CS	0	1	0	0	4
K867	Smk Pot Flt, M4A2	3	0	0	0	3
L305	Sig Illum GREEN Para	3	1	1	0	19
L306	Sig Illum RED Para	3	1	1	1	21
L307	Sig Illum WHITE Para	4	2	1	0	24
L311	Sig Illum RED Star	3	0	1	0	15
L312	Sig Illum WHITE Star	10	4	2	0	39
L314	Sig Illum GREEN Star	7	1	1	1	27
L495	Flare Surface Trip	9	3	1	0	33
L594	Sim Proj Grnd Brst	50	12	8	0	194
L595	Sim Proj Air Burst Liq (SPAL), M9	1[3]	0	0	0	1
L596	Sim Arty Gun Flash	4	2	1	0	24
L598	Sim Booby trap Flash	6	2	1	1	30
L599	Sim Booby trap Illum	6	3	1	0	30
L600	Sim Booby trap Whis	11	4	2	0	51
L601	Sim Hand Gren	30	6	8	0	150
Freq		1	1	1	1	

Notes:
[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.
[2] OPFOR requirements are included in this table.
[3] Denotes one kit of 20 simulators.

Table 8–3
Annual Pyrotechnic Requirements Group 1: IN/AR Separate Company (TRC A)

		FTX		LFX	Annual
DODIC	Nomenclature	Co	Plt	Co	Rqmt
G930	Gren Smk HC	4	2	2	18
G940	Gren Smk GREEN	5	2	2	21
G945	Gren Smk YELLOW	4	3	0	22
G950	Gren Smk RED	3	1	0	9
G955	Gren Smk VIOL	2	1	0	8
G963	Gren Smk CS	2	1	0	8
K768	Riot Control Agent CS	1	0	0	1
K867	Smk Pot, Flt M4A2	1	0	0	1
L305	Sig Illum GREEN Para	1	1	0	7

Table 8–3
Annual Pyrotechnic Requirements Group 1: IN/AR Separate Company (TRC A)—Continued

		FTX		LFX	Annual
DODIC	Nomenclature	Co	Plt	Co	Rqmt
L306	Sig Illum RED Para	1	1	2	9
L307	Sig Illum WHITE Para	2	1	0	8
L311	Sig Illum RED Star	0	1	0	6
L312	Sig Illum WHITE Star	4	1	0	10
L314	Sig Illum GREEN Star	2	1	2	10
L495	Flare Surface Trip	3	1	0	9
L594	Sim Proj Grnd Brst	15	6	0	51
L595	Sim Proj Air Burst Liq (SPAL), M9	1[3]	0	0	1
L596	Sim Arty Gun Flash	2	1	0	8
L598	Sim Booby trap Flash	2	1	1	9
L599	Sim Booby trap Illum	2	1	0	8
L600	Sim Booby trap Whis	3	1	0	9
L601	Sim Hand Gren	8	13	0	86
Freq		1	2	1	0

Notes:

[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.

[2] OPFOR requirements are included in this table.

[3] Denotes one kit of 20 simulators.

Table 8–4
Annual Pyrotechnic Requirements Group 1: IN/AR Separate Company (TRC B/C)

		FTX		LFX	Annual
DODIC	Nomenclature	Co	Plt	Co	Rqmt
G930	Gren Smk HC	4	2	2	12
G940	Gren SMK GREEN	5	2	2	13
G945	Gren Smk YELLOW	4	3	0	13
G950	Gren Smk RED	3	1	0	6
G955	Gren Smk VIOL	2	1	0	5
G963	Gren Smk CS	2	1	0	5
K768	Riot Control Agent CS	1	0	0	1
K867	Smk Pot, Flt M4A2	1	0	0	1
L305	Sig Illum GREEN Para	1	1	0	4
L306	Sig Illum RED Para	1	1	2	6
L307	Sig Illum WHITE Para	2	1	0	5
L311	Sig Illum RED Star	1	1	0	4
L312	Sig Illum WHITE Star	4	1	0	7
L314	Sig Illum GREEN Star	2	1	2	7
L495	Flare Surface Trip	3	1	0	6
L594	Sim Proj Grnd Brst	15	13	0	54
L596	Sim Arty Gun Flash	2	1	0	5
L598	Sim Booby trap Flash	2	1	1	6
L599	Sim Booby trap Illum	2	1	0	5
L600	SIM Booby trap Whis	3	1	0	6

Table 8–4
Annual Pyrotechnic Requirements Group 1: IN/AR Separate Company (TRC B/C)—Continued

		FTX		LFX	Annual
DODIC	Nomenclature	Co	Plt	Co	Rqmt
L601	Sim Hand Gren	8	13	0	47
Freq		1	1	1	

Notes:
[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.
[2] OPFOR requirements are included in this table.

Table 8–5
Annual Pyrotechnic Requirements Group 1: Cav Sqdn (TRC A)

		FTX			LFX	Annual
DODIC	Nomenclature	Sqdn	Trp	Plt	Trp	Rqmt
G930	Gren Smk HC	19	6	2	1	98
G940	Gren Smk GREEN	19	6	2	1	98
G945	Gren Smk YELLOW	19	6	2	0	86
G950	Gren Smk RED	7	3	2	0	60
G955	Gren Smk VIOL	9	2	1	0	38
G963	Gren Smk CS	5	3	0	0	22
K768	Riot Control Agent CS	0	1	0	0	4
K867	Smk Pot, Flt M4A2	4	2	0	0	16
L305	Sig Illum GREEN Para	5	1	1	0	26
L306	Sig Illum RED Para	4	2	1	2	52
L307	Sig Illum WHITE Para	5	2	1	0	30
L311	Sig Illum RED Star	3	0	1	0	15
L312	Sig Illum WHITE Star	7	4	2	0	54
L314	Sig Illum GREEN Star	5	2	1	2	54
L495	Flare Surface Trip	5	2	1	0	30
L594	Sim Proj Grnd Brst	50	3	0	0	152
L595	Sim Proj Air Burst Liq (SPAL), M9	1[1]	0	0	0	2
L596	Sim Arty Gun Flash	2	2	0	0	24
L598	Sim Boobytrap Flash	5	3	1	1	34
L599	Sim Boobytrap Illum	5	2	1	0	25
L600	Sim Boobytrap Whis	6	3	2	0	48
L601	Sim Hand Gren	28	8	6	0	160
Freq		2	1	1	1	

Notes:
[1] Denotes one kit of 20 simulators.

Table 8–6
Annual Pyrotechnic Requirements Group 1: Cav Sqdn (TRC B/C)

		FTX		LFX	Annual
DODIC	Nomenclature	Trp	Plt	Trp	Rqmt
G930	Gren Smk HC	6	3	2	68
G940	Gren Smk GREEN	6	2	2	36
G945	Gren Smk YELLOW	7	2	0	52
G950	Gren Smk RED	3	2	0	36
G955	Gren Smk VIOL	2	1	0	20
G963	Gren Smk CS	2	1	0	20
K768	Riot Control Agent CS	0	1	0	4
K867	Smk Pot, Flt M4A2	2	0	0	8
L305	Sig Illum GREEN Para	1	1	0	16
L306	Sig Illum RED Para	2	1	2	28
L307	Sig Illum WHITE Para	2	1	0	20
L311	Sig Illum RED Star	1	1	0	16
L312	Sig Illum WHITE Star	4	2	0	40
L314	Sig Illum GREEN Star	2	1	2	28
L495	Flare Surface Trip	2	1	0	20
L594	Sim Proj Grnd Brst	10	5	0	100
L596	Sim Arty Gun Flash	2	1	0	20
L598	Sim Booby trap Flash	3	1	1	28
L599	Sim Booby trap Illum	2	1	0	20
L600	Sim Booby trap Whis	3	2	0	36
L601	Sim Hand Gren	8	6	0	104
Freq		1	1	1	

Table 8–7
Pyrotechnic Requirements Group 1: Cavalry Separate Troop (TRC A)

		FTX		LFX	Annual
DODIC	Nomenclature	Trp	Plt	Trp	Rqmt
G930	Gren Smk HC	4	4	3	19
G940	Gren Smk GREEN	5	2	2	13
G945	Gren Smk YELLOW	3	5	0	18
G950	Gren Smk RED	3	2	0	11
G955	Gren Smk VIOL	3	1	0	6
G963	Gren Smk CS	2	0	0	2
K768	Riot Control Agent CS	1	0	0	1
K867	Smk Pot, Flt M4A2	2	1	0	8
L305	Sig Illum GREEN Para	1	1	0	4
L306	Sig Illum RED Para	1	1	1	5
L307	Sig Illum WHITE Para	2	1	0	5
L311	Sig Illum RED Star	1	1	0	4
L312	Sig Illum WHITE Star	3	2	0	11
L314	Sig Illum GREEN Star	2	1	2	7
L495	Flare Surface Trip	3	1	0	6

Table 8–7
Pyrotechnic Requirements Group 1: Cavalry Separate Troop (TRC A)—Continued

		FTX		LFX	Annual
DODIC	Nomenclature	Trp	Plt	Trp	Rqmt
L594	Sim Proj Grnd Brst	15	8	0	39
L595	Sim Proj Air Burst Liq (SPAL), M9	1[1]	0	0	1
L596	Sim Arty Gun Flash	2	1	0	5
L598	Sim Booby trap Flash	2	2	1	12
L599	Sim Booby trap Illum	3	1	0	6
L600	Sim Booby trap Whis	3	2	0	11
L601	Sim Hand Gren	7	7	0	16
Freq		1	1	1	

Notes:
[1] Denotes one kit of 20 simulators.

Table 8–8
Annual Pyrotechnic Requirements Group 1: Cavalry Separate Troop (TRC B/C)

		FTX		LFX	Annual
DODIC	Nomenclature	Trp	Plt	Trp	Rqmt
G930	Gren Smk HC	4	4	2	18
G940	SMK GREEN	5	2	2	1
G945	Gren Smk YELLOW	3	5	0	18
G950	Gren Smk RED	3	2	0	9
G955	Gren Smk VIOL	3	1	0	6
G963	Gren Smk CS	2	1	0	5
K867	Smk Pot, Flt M4A2	2	0	0	2
L305	Sig Illum GREEN Para	1	1	0	4
L306	Sig Illum RED Para	2	1	2	7
L307	Sig Illum WHITE Para	2	1	0	5
L311	Sig Illum RED Star	1	1	0	4
L312	Sig Illum WHITE Star	3	2	0	9
L314	Sig Illum GREEN Star	2	1	2	7
L495	Flare Surface Trip	3	1	0	6
L594	Sim Proj Grnd Brst	15	8	0	39
L596	Sim Arty Gun Flash	2	1	0	5
L598	Sim Booby trap Flash	2	2	1	8
L599	Sim Booby trap Illum	3	1	0	6
L600	Sim Booby trap Whis	3	2	0	9
L601	Sim Hand Gren	7	7	0	28
Freq		1	1	1	

Table 8–9
Annual Pyrotechnic Requirements Group 2: FA/AV/ADA/MP/EN(CBT) Battalion (TRC A)

		FTX		Annual
DODIC	Nomenclature	Co	Plt	Rqmt
G930	Gren Smk HC	3	2	48
G940	Gren Smk GREEN	2	0	16
G945	Gren Smk YELLOW	3	2	48
G950	Gren Smk RED	3	1	36
G955	Gren Smk VIOL	2	1	28
G963	Gren Smk CS	2	1	28
K867	Smk Pot, Flt M4A2	1	1	20
L305	Sig Illum GREEN Para	1	0	8
L306	Sig Illum RED Para	2	1	28
L307	Sig Illum WHITE Para	1	1	20
L311	Sig Illum RED Star	1	0	8
L312	Sig Illum WHITE Star	1	1	20
L314	Sig Illum GREEN Star	1	1	20
L495	Flare Surface Trip	2	1	28
L594	Sim Proj Grnd Brst	6	3	84
L596	Sim Arty Gun Flash	1	1	20
L598	Sim Booby trap Flash	2	2	40
L599	Sim Booby trap Illum	2	1	28
L600	Sim Booby trap Whis	2	1	28
L601	Sim Hand Gren	4	2	56
Freq		2	1	

Notes:
[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.
[2] OPFOR requirements are included in this table.

Table 8–10
Annual Pyrotechnic Requirements Group 2: FA/AV/ADA/MP/EN(CBT) Battalion (TRC B/C)

		FTX		Annual
DODIC	Nomenclature	Co	Plt	Rqmt
G930	Gren Smk HC	3	2	36
G940	Gren Smk GREEN	2	0	8
G945	Gren Smk YELLOW	3	2	36
G950	Gren Smk RED	3	2	36
G955	Gren Smk VIOL	2	1	20
G963	Gren Smk CS	2	1	20
L305	Sig Illum GREEN Para	1	0	4
L306	Sig Illum RED Para	2	1	20
L307	Sig Illum WHITE Para	1	1	16
L311	Sig Illum RED Star	1	0	4
L312	Sig Illum WHITE Star	1	1	16
L314	Sig Illum GREEN Star	1	1	16
L495	Flare Surface Trip	2	1	20
L594	Sim Proj Grnd Brst	6	3	42

Table 8–10
Annual Pyrotechnic Requirements Group 2: FA/AV/ADA/MP/EN(CBT) Battalion (TRC B/C)—Continued

		FTX		Annual
DODIC	Nomenclature	Co	Plt	Rqmt
L596	Sim Arty Gun Flash	1	1	4
L598	Sim Booby trap Flash	2	2	32
L599	Sim Booby trap Illum	2	1	20
L600	Sim Booby trap Whis	2	1	20
L601	Sim Hand Gren	4	2	40
Freq		.5	.5	

Notes:

[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.

[2] OPFOR requirements are included in this table.

Table 8–11
Annual Pyrotechnic Requirements Group 2: FA/AV/ADA/MP/EN(CBT) Separate Company

TRC A		FTX		Annual
DODIC	Nomenclature	Co	Plt	Rqmt
G930	Gren Smk HC	3	2	9
G940	Gren Smk GREEN	2	0	2
G945	Gren Smk YELLOW	3	2	11
G950	Gren Smk RED	4	2	10
G955	Gren Smk VIOL	2	1	5
G963	Gren Smk CS	2	1	5
K867	Smk Pot, FLT M4A2	1	1	4
L305	Sig Illum GREEN Para	1	0	1
L306	Sig Illum RED Para	2	1	5
L307	Sig Illum WHITE Para	1	1	4
L311	Sig Illum RED Star	1	0	1
L312	Sig Illum WHITE Star	1	1	4
L314	Sig Illum GREEN Star	1	1	4
L495	Flare Surface Trip	2	1	5
L594	Sim Proj Grnd Brst	5	3	14
L596	Sim Arty Gun Flash	1	1	4
L598	Sim Booby trap Flash	2	2	8
L599	Sim Booby trap Illum	2	1	5
L600	Sim Booby trap Whis	2	1	5
L601	Sim Hand Gren	4	2	10
Freq		2	1	

Notes:

[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.

[2] OPFOR requirements are included in this table.

Table 8–12
Annual Pyrotechnic Requirements Group 2: FA/AV/ADA/MP/EN(CBT) Separate Company (TRC B/C)

		FTX		Biennial
DODIC	Nomenclature	Co	Plt	Rqmt
G930	Gren Smk HC	3	2	9
G940	Gren Smk GREEN	2	0	2
G945	Gren Smk YELLOW	3	2	9
G950	Gren Smk RED	4	2	10
G955	Gren Smk VIOL	2	1	5
G963	Gren Smk CS	2	1	5
K867	Smk Pot, Flt M4A2	1	1	4
L305	Sig Illum GREEN Para	1	0	1
L306	Sig Illum RED Para	2	1	5
L307	Sig Illum WHITE Para	1	1	4
L311	Sig Illum RED Star	1	0	1
L312	Sig Illum WHITE Star	1	1	4
L314	Sig Illum GREEN Star	1	1	4
L495	Flare Surface Trip	2	1	5
L594	Sim Proj Grnd Brst	5	3	14
L596	Sim Arty Gun Flash	1	1	4
L598	Sim Booby trap Flash	2	2	8
L599	Sim Booby trap Illum	2	1	5
L600	Sim Booby trap Whis	2	1	5
L601	Sim Hand Gren	4	2	10
Freq		.5	.5	

Notes:
[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.
[2] OPFOR requirements are included in this table.

Table 8–13
Annual Pyrotechnic Requirements Group 2: Chemical Units (TRC A)

		Mech NBC Recon Plt	Mech Smoke Plt	Motorized Smoke Plt	Smoke/Decon Plt Dual Purpose	Decon HQ Plt	Decon Plt Corps
DODIC	Nomenclature	FTX	FTX	FTX	FTX	FTX	FTX
G930	Gren Smk HC	5	4	4	4	4	4
G940	Gren Smk GREEN	3	4	4	4	3	3
G945	Gren Smk YELLOW	4	4	4	4	4	2
G950	Gren Smk RED	5	5	5	5	5	5
G955	Gren Smk VIOL	4	5	5	5	4	4
G963	Gren Smk CS	3	3	3	3	3	3
K867	Smk Pot Floating M4A2	0	14	14	14	8	8
L305	Sig Illum GREEN Para	3	3	3	3	3	3
L306	Sig Illum RED Para	3	3	3	3	3	3
L307	Sig Illum WHITE Para	1	1	1	1	1	1
L311	Sig Illum RED Star	1	1	1	1	1	1

Table 8–13
Annual Pyrotechnic Requirements Group 2: Chemical Units (TRC A)—Continued

DODIC	Nomenclature	Mech NBC Recon Plt FTX	Mech Smoke Plt FTX	Motorized Smoke Plt FTX	Smoke/Decon Plt Dual Purpose FTX	Decon HQ Plt FTX	Decon Plt Corps FTX
L312	Sig Illum WHITE Star	1	1	1	1	1	1
L314	Sig Illum GREEN Star	1	1	1	1	1	1
L495	Flare Surface Trip	3	3	3	3	3	3
L594	Sim Proj Grnd Brst	4	4	4	4	4	4
L595	Sim Proj Air Burst Liq (SPAL), M9	1[2]	0	0	0	1[2]	1[2]
L596	Sim Arty Gun Flash	3	3	3	3	3	3
L598	Sim Booby trap Flash	4	4	4	4	4	4
L599	Sim Booby trap Illum	4	4	4	4	4	4
L600	Sim Booby trap Whis	4	4	4	4	4	4
L601	Sim Hand Gren	4	4	4	4	4	4
Freq		4	4	4	4	4	4

Notes:

[1] The table shows resourcing for an FTX and the total annual requirement that unit may receive. Commanders may desire to use more or less pyrotechnics than what is indicated for a particular exercise. However, the total annual requirement that a unit may receive will not be exceeded during the training year.

[2] Denotes one kit of 20 simulators.

Table 8–14
Annual Pyrotechnic Requirements Group 2: Chemical Units (TRC B/C)

DODIC	Nomenclature	Mech NBC Recon Plt FTX	Mech Smoke Plt FTX	Motorized Smoke Plt FTX	Smoke/Decon Plt Dual Purpose FTX	Decon HQ Plt FTX	Decon Plt Corps FTX
G930	Gren Smk HC	5	4	4	4	4	4
G940	Gren Smk GREEN	3	4	4	4	3	3
G945	Gren Smk YELLOW	4	4	4	4	4	2
G950	Gren Smk RED	5	5	5	5	5	5
G955	Gren Smk VIOL	4	4	4	4	4	4
G963	Gren Smk CS	3	3	3	3	3	3
K867	Smk Pot Floating M4A2	0	14	14	14	8	8
L305	Sig Illum GREEN Para	3	3	3	3	3	3
L306	Sig Illum RED Para	3	3	3	3	3	3
L307	Sig Illum WHITE Para	1	1	1	1	1	1
L311	Sig Illum RED Star	1	1	1	1	1	1
L312	Sig Illum WHITE Star	1	1	1	1	1	1
L314	Sig Illum GREEN Star	1	1	1	1	1	1
L495	Flare Surface Trip	3	3	3	3	3	3
L594	Sim Proj Grnd Brst	4	4	4	4	4	4
L596	Sim Arty Gun Flash	3	3	3	3	3	3
L595	Sim Proj Air Burst Liq (SPAL), M9	1[2]	0	0	0	1[2]	1[2]
L598	Sim Booby trap Flash	4	4	4	4	4	4
L599	Sim Booby trap Illum	4	4	4	4	4	4
L600	Sim Booby trap Whis	4	4	4	4	4	4

Table 8–14
Annual Pyrotechnic Requirements Group 2: Chemical Units (TRC B/C)—Continued

DODIC	Nomenclature	Mech NBC Recon Plt	Mech Smoke Plt	Motorized Smoke Plt	Smoke/Decon Plt Dual Purpose	Decon HQ Plt	Decon Plt Corps
		FTX	FTX	FTX	FTX	FTX	FTX
L601	Sim Hand Gren	4	4	4	4	4	4
Freq		1	1	1	1	1	1

Notes:

[1] The table shows resourcing for an FTX and the total annual requirement that unit may receive. Commanders may desire to use more or less pyrotechnics than what is indicated for a particular exercise. However, the total annual requirement that a unit may receive will not be exceeded during the training year.

[2] Denotes one kit of 20 simulators.

Table 8–15
Annual Pyrotechnic Requirements Group 3: Other Battalions (TRC A)

DODIC	Nomenclature	Annual Rqmt
G930	Gren Smk HC	32
G940	Gren Smk GREEN	7
G945	Gren Smk YELLOW	18
G950	Gren Smk RED	22
G955	Gren Smk VIOL	14
G963	Gren Smk CS	14
K867	Smk Pot Flt M4A2	14
L305	Sig Illum GREEN Para	4
L306	Sig Illum RED Para	14
L307	Sig Illum WHITE Para	14
L311	Sig Illum RED Star	4
L312	Sig Illum WHITE Star	14
L314	Sig Illum GREEN Star	14
L495	Flare Surface Trip	18
L594	Sim Proj Grnd Brst	32
L595	Sim Proj Air Brst Lid (SPAL)M9	2[3]
L596	Sim Arty Gun Flash	7
L598	Sim Booby trap Flash	18
L599	Sim Booby trap Illum	14
L600	Sim Booby trap Whis	18
L601	Sim Hand Gren	36
Freq	1	

Notes:

[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.

[2] OPFOR requirements are included in this table.

[3] Each kit contains 20 simulators.

Table 8–16
Annual Pyrotechnic Requirements Group 3: Other Battalions (TRC B/C)

DODIC	Nomenclature	Annual Rqmt
G930	Gren Smk HC	18
G940	Gren Smk GREEN	4
G945	Gren Smk YELLOW	10
G950	Gren Smk RED	12
G955	Gren Smk VIOL	8
G963	Gren Smk CS	8
K867	Smk Pot Flt M4A2	8
L305	Sig Illum GREEN Para	2
L306	Sig Illum RED Para	8
L307	Sig Illum WHITE Para	8
L311	Sig Illum RED Star	2
L312	Sig Illum WHITE Star	8
L314	Sig Illum GREEN Star	8
L495	Flare Surface Trip	10
L594	Sim Proj Grnd Brst	18
L595	Sim Proj Air Brst Lid (SPAL)M9	1[3]
L596	Sim Arty Gun Flash	4
L598	Sim Booby trap Flash	10
L599	Sim Booby trap Illum	8
L600	Sim Booby trap Whis	8
L601	Sim Hand Gren	20
Freq	1	

Notes:
[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.
[2] OPFOR And Lanes Training requirements are included in this table.
[3] Denotes one kit of 20 simulators.

Table 8–17
Annual Pyrotechnic Requirements Group 3: Other Separate Companies (TRC A)[1,2]

DODIC	Nomenclature	Annual Rqmt
G930	Gren Smk HC	7
G940	Gren Smk GREEN	2
G945	Gren Smk YELLOW	4
G950	Gren Smk RED	8
G955	Gren Smk VIOL	4
G963	Gren Smk CS	4
K867	Smk Pot Flt M4A2	4
L305	Sig Illum GREEN Para	1
L306	Sig Illum RED Para	4
L307	Sig Illum WHITE Para	4
L311	Sig Illum RED Star	1
L312	Sig Illum WHITE Star	4
L314	Sig Illum GREEN Star	4
L495	Flare Surface Trip	4

Table 8–17
Annual Pyrotechnic Requirements Group 3: Other Separate Companies (TRC A)[1,2] —Continued

DODIC	Nomenclature	Annual Rqmt
L594	Sim Proj Grnd Brst	8
L595	Sim Proj Air Brst Lid (SPAL)M9	1[3]
L596	Sim Arty Gun Flash	1
L598	Sim Booby trap Flash	7
L599	Sim Booby trap Illum	4
L600	Sim Booby trap Whis	4
L601	Sim Hand Gren	8
Freq	1	

Notes:

[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.

[2] OPFOR and lanes training requirements are included in this table.

[3] Denotes one kit of 20 simulators.

Table 8–18
Annual Pyrotechnic Requirements Group 3: Other Separate Companies (TRC B/C) and USAR Training Battalion (TRC D)

DODIC	Nomenclature	Annual Rqmt
G930	Gren Smk HC	7
G940	Gren Smk GREEN	2
G945	Gren Smk YELLOW	4
G950	Gren Smk RED	8
G955	Gren Smk VIOL	4
G963	Gren Smk CS	4
K867	Smk Pot Flt M4A2	4
L305	Sig Illum GREEN Para	1
L306	Sig Illum RED Para	4
L307	Sig Illum WHITE Para	4
L311	Sig Illum RED Star	1
L312	Sig Illum WHITE Star	4
L314	Sig Illum GREEN Star	4
L495	Flare Surface Trip	3
L594	Sim Proj Grnd Brst	4
L595	Sim Proj Air Brst Lid (SPAL) M9	1[3]
L596	Sim Arty Gun Flash	1
L598	Sim Booby trap Flash	4
L599	Sim Booby trap Illum	3
L600	Sim Booby trap Whis	3
L601	Sim Hand Gren	4
Freq	1	

Notes:

[1] The annual requirement represents the pyrotechnic requirements for a training year. Unit commanders may desire to use more or less pyrotechnics for a particular exercise than what is suggested. However, units cannot exceed their annual authorization.

[2] OPFOR and lanes training requirements are included in this table.

[3] Denotes one kit of 20 simulators.

Table 8–19
Annual Pyrotechnic Requirements Group 3: Explosive Ordnance Disposal (EOD) Companies/Bns (TRC A, C)

		FTX		ARTEP	
		EOD	Control	EOD	Control
DODIC	Nonenclature	Det	Team	Det	Team
G900	Gren Smk M14 INC	7	7	14	7
G930	Gren Smk HC M8	4	4	4	4
G940	Gren Smk M18 GREEN	4	4	4	4
G945	Gren Smk M18 YELLOW	4	4	4	4
G950	Gren Smk M18 RED	4	4	4	4
G955	Gren Smk M18 VIOL	4	4	4	4
L310	Sig Illum GREEN Star Para	4	4	4	4
L311	Sig Illum RED Star Para	4	4	4	4
L312	Sig Illum WHITE Star Para	4	4	4	4
L594	Sim Proj Grnd Brst M45A2	6	6	6	6
L598	Sim Booby trap Flash M117	7	7	7	7
ML03	Firing Device M142	18	18	18	18
M842	Squib Elect M1 Vented	4	4	8	4

Chapter 9
Mobilization Guidance for Deploying Forces

9–1. Standards, strategies, and requirements

a. This chapter provides guidance for RC (TRC B and C) upon mobilization.

b. The objective is to assist field commanders in quickly attaining the highest possible levels of weapon proficiency during mobilization in preparation for deployment.

c. The training guidance presented in this chapter is based on doctrine contained in the FMs and ARTEPs, which must be consulted for specifics.

d. Training programs for RC units are based on a 12-month annual training cycle.

9–2. Training assumptions, objectives, and priorities

a. Several assumptions are made regarding the level of unit training. These assumptions are made to provide a "baseline" from which to determine training ammunition requirements. They are as follows:

(1) Unit has met its TRC standards within the time frames outlined in the peacetime programs contained in this pamphlet.

(2) Crew, section, squad, and platoon integrity will be maintained while conducting mobilization training.

b. Unit training objectives for mobilization are derived from the specific weapon system TRC A standards outlined in this manual.

c. The training priorities during mobilization are determined by the commander. Not all units will start at the same level of proficiency; some will have exceeded their TRC standards while others will not have met theirs. Commanders at all levels need to assess their unit's strengths and weaknesses to determine specific requirements.

9–3. Developing mobilization training strategies

a. All soldiers/crews may qualify with their assigned and/or designated weapons prior to deployment, if they have not qualified within six months of deployment date.

b. Upon mobilization, commanders must assess their individual unit's training status and modify their training strategies to achieve the standards outlined for TRC A units. In developing effective training strategies, commanders should consider the following:

(1) *Status of training.* Commanders must identify where their individual soldiers/crews are in their annual training programs to determine which training tasks (individual and collective) have not been completed. Commanders may elect to have experienced crews train under a modified strategy that recognizes their level of proficiency.

(2) *Training proficiency.* Commanders must assess the level of proficiency their units have attained in mission essential weapon training tasks. Based on their assessment, commanders may determine that some tasks/events need to be repeated prior to going on to more advanced tasks.

(3) *Mission requirements.* When mission requirements are known in advance of deployment, commanders may elect to modify training strategies to focus on tasks that are critical for mission success. For example, an Infantry antiarmor platoon that will deploy in a peacekeeping role may elect to concentrate on small arms weapon proficiency.

(4) *Supporting resources.* Commanders must modify their training strategies, taking into account the availability of key training resources such as training ammunition, TADSS, ranges, support personnel and time.

9–4. Training ammunition requirements

a. Training ammunition requirements for mobilization are based on the amounts needed to bring TRC B and C units to TRC A standards.

b. Commanders may request additional training ammunition to support requirements determined in accordance with paragraph 9-3.

Chapter 10
Combat Training Centers

10–1. Introduction

a. This chapter provides the rotational training ammunition requirements for the combat training centers: National Training Center, Joint Readiness Training Center, and Combat Maneuver Training Center. The tables at the end of this chapter provide "per

rotation" or "per event" requirements by DODIC. The ammunition and pyrotechnics are based on historical usage and reflect quantities that are actually expended. Actual quantities of ammunition and pyrotechnics needed to provide a full basic load for player units are provided through internal management of annual authorizations.

b. The objective of this chapter is to assist ammunition managers in forecasting ammunition and pyrotechnic requirements and preclude decrementing home-station training ammunition to fully resource the combat training centers.

10–2. Resources

a. Resources provided in tables 10-1 to 10-14 are the average quantities that are expended by each type of rotation at the various training centers. Included in the tables are the types of training ammunition necessary for the weapon systems used at the training centers. Normal and specialized pyrotechnics such as Hoffman charges, ATWESS charges, M80 blast simulators are also included.

b. To determine the annual requirement, ammunition managers should take the totals provided times the number of rotations of a specific type that are anticipated for the upcoming year. For the Joint Readiness Training Center, required resources are identified by type event rather than rotation. Therefore, ammunition managers must determine the number and type event each rotation requires.

Table 10–1A
CMTC (Live Fire) Requirements: BLUEFOR

		12 HVY	1 LT	2 CAV	6 ATK COs	TOTAL
DODIC	Nomenclature	CO/TMs	CO/TM	TRPs	4 AIR TRPs	ROUNDS
A059	Ctg, 5.56-mm BALL	19721	14760	4339	0	38820
A063	Ctg, 5.56-mm TRACER	2970	3600	436	0	7006
A064	Ctg, 5.56-MM BALL	21978	12000	4835	0	38813
A131	Ctg, 7.62-mm 4:1	24710	7200	5436	0	37346
A358	Ctg, 9-mm F/AT-4	0	18	0	0	18
A363	Ctg, 9-mm BALL	0	60	0	0	60
A557	Ctg, 50 CAL BALL	35640	5000	7841	15360	63841
A940	Ctg, 25-mm AP-T[4]	6138	0	1350	0	7488
A976	Ctg, 25-mm TP-T[4]	6633	0	1459	0	8092
B118	Cgt, 30-mm	0	0	0	4901	4901
B519	Ctg, 40-mm TP-T	87	480	19	0	586
B535	40-mm WHITE-STAR	23	72	5	0	100
B584	40-mm MK 194	980	100	213	0	1293
B627	60-mm ILLUM	0	72	0	0	72
B632	60-mm HE	0	50	0	0	50
B642	60-mm HE	0	72	0	0	72
C226	81-mm ILLUM	0	72	0	0	72
C256	81-mm HE	0	72	0	0	72
C445	105-mm HE	0	50	0	0	50
C449	105-mm ILLUM	0	100	0	0	100
C452	105-mm HC	0	100	0	0	100
C623	120-mm HE	250	0	50	0	300
C784	120-mm TP-T[4]	475	0	118	0	593
C785	120-mm TPCDS-T[4]	594	0	157	0	751
C995	AT-4	0	6	0	0	6
D505	155-mm ILLUM[4]	30	0	20	0	50
D528	155-mm SMK[4]	33	0	22	0	55
D540	PROP CHG GB[4]	150	0	99	0	249
D541	PROP CHG WB[4]	601	0	397	0	998
D544	155-mm HE[4]	897	0	592	0	1489
G811	GREN ,HD PRAC	129	0	28	0	157
G878	FUZE, GREN HD	129	70	28	0	227
G881	GREN, HD FRAG	180	210	30	0	420
G930	GREN,SMK HC	0	60	0	0	60

Table 10–1A
CMTC (Live Fire) Requirements: BLUEFOR—Continued

DODIC	Nomenclature	12 HVY CO/TMs	1 LT CO/TM	2 CAV TRPs	6 ATK COs 4 AIR TRPs	TOTAL ROUNDS
G940	GREN, SMK GRN	0	30	0	0	30
G955	GREN,SMK VIOL	0	30	0	0	30
H975	RKT 2.75 IN	0	0	0	414	414
J143	RKT, MICLIC	12	0	3	0	15
K051	FUZE, AT PRAC	4950	500	1089	0	6539
K143	MINE M18 CLAY	26	18	6	0	50
K230	MINE TRAINING[4]	13	650	0	0	1063
L119	SIG KIT PERS	79	8	17	0	104
L307	SIG ILLUM WHITE ST	0	12	0	0	12
L314	SIG ILLUM GR ST	0	12	0	0	12
L709	Sim Tgt Hit	3000	0	0	0	3000
L715	Sim Anti-Tank Guided Ms[l]	200	0	0	0	200
L720	Sim Tgt Kill	3000	0	0	0	3000
M023	CHG, DEMO C-4	256	26	56	0	338
MO28	DEMO KIT BANG	24	6	4	0	34
MO30	CHG, DEMO 1/4	9	1	2	0	12
M032	CHG, DEMO 1# TNT	32	3	7	0	42
MO39	CHG,DEMO 40 #	20	2	4	0	26
M130	CAP BLASTING, ELEC	50	75	11	0	136
M131	CAP BLASTING, NON ELEC	465	45	102	0	612
M327	COUPLING BASED	1381	140	304	0	1825
M456	DET CORD (FT)	2970	500	653	0	4123
M670	FUZE, BLASTING	720	150	158	0	1028
M757	DEMO SATCHEL	24	1	4	0	29
M766	IGNITER, FUZE	131	150	29	0	310
M913	LINE CHG MICLIC	12	0	3	0	15
M914	INERT MICLIC	12	0	2	0	14
MLO3	FIRING DEVICE	50	5	11	0	66
MN60	Igniter Electric Match	200	0	0	0	200
N285	FUZE, MTSQ	63	18	42	0	123
N286	FUZE, MTSQ	350	50	250	0	650
N335	FUZE, PD (MORTAR)	297	0	65	0	362
N340	FUZE, PD[4]	0	50	0	0	50
N523	PRIMER[4]	3286	0	768	0	4054

Notes:

[1] INF/AR/TRP will live fire at GTA during CMTC rotation.

[2] Direct support FA battalions will fire per company LFX for brigade rotations.

[3] Attack helicopter company and air cavalry troop will live fire during their CMTC rotations.

[4] 25-mm, 40-mm (MK 19), 120-mm (tank), 155-mm and TOW missiles are not resourced by CMTC STRAC. Units must use home station training ammunition (if desired) to fire during CMTC rotations.

Table 10–1B
CMTC Rotational Requirements: BLUEFOR

		TYPE/(FREQ) ROTATION			
DODIC	Nomenclature	AR (6)	MECH (6)	Div Cav (2)	LT/ABN (1)
A075	Ctg, 5.56-MM BLK /AR	15625	30920	21525	65500
A080	Ctg, 5.56-mm BLK /RIFLE	39520	74406	58376	108250
A111	Ctg, 7.62-mm BLK M82 Link	29250	34250	37250	71500
A598	Ctg, .50 CAL BLK M9 Link	22800	32300	18200	78700
A599	Ctg, .50 CAL BLK M1A1	170	170	500	1400
B535	40-mm White Star Para	0	0	0	65
G930	Gren Hand Smk HC	192	192	208	0
G940	Gren Smk GRN	64	64	64	206
G950	Gren Smk RED	26	26	26	86
G955	Gren Smk VIOLET	64	64	64	200
K867	Smk Pot, FLT M4A2	58	58	62	0
L306	Sig Illum, RED	24	24	24	78
L311	Sig Illum, RED Para	24	24	24	78
L314	Sig Hand Held GRN	0	0	0	60
L367	Sim Antitank (ATWESS)	500	1753	1753	3443
L495	Flare Trip M49	25	24	24	78
L598	Sim Booby trap, Flash	24	24	24	78
L599	Sim Booby trap, Illum	24	24	24	78
L600	Sim, Booby trap, Whistle	24	24	24	78
L602	Sim Flash Arty, M21	3050	1950	3200	3800
N523	Primer Percussion, M82	0	0	0	175

Notes:
[1] This table shows the total requirement for one rotation. The annual requirement will vary based on the number and type of rotations that take place in a given year.

Table 10–2
CMTC Rotational Requirements: OPFOR/OPS GP

DODIC	Nomenclature	OPFOR	OPS GP
A075	Ctg, 5.56-mm BLK /AR	15000	0
A080	Ctg, 5.56-mm BLK /RIFLE	20000	0
A111	Ctg, 7.62-mm BLK	15000	0
A598	Ctg. .50 CAL BLK	5000	0
G930	Gren, Hand Smk HC	400	224
G940	Gren, Hand Smk GRN	200	0
G945	Gren, Hand Smk YELL	0	100
G950	Gren, Hand Smk RED	95	127
G955	Gren, Hand Smk VIOLET	200	0
G963	Gren, Hand Riot CS	0	193
K867	Smk Pot, FLT M4A2	0	25
L306	Sig Illum, RED Cluster	95	0
L307	Sig Illum, WHITE, Cluster	120	144
L312	Sig Illum, WHITE Star	0	120
L314	Sig Illum, GREEN, Cluster	160	0
L366	Sim Proj, Airburst	0	2500

Table 10–2
CMTC Rotational Requirements: OPFOR/OPS GP—Continued

DODIC	Nomenclature	OPFOR	OPS GP
L367	Sim, Anti-tank (ATWESS)	1600	0
L495	Flare, Surface Trip	15	0
L508	Fusee Warning, RED	0	0
L594	Sim Proj, Groundburst	0	2500
L598	Sim Booby trap, Flash	15	0
L599	Sim Booby trap, Illum	15	0
L600	Sim Booby trap, Whistling	15	0
L601	Sim Hand Gren	0	2500
L602	Sim Flash, M21 WESS	1250	0
M131	Cap, Blasting, Elec	0	125
M456	det Cord (FT)	0	2000
M670	fuze, Blasting	0	650
M766	Igniter, Fuze	0	125

Notes:
[1] The rotational requirement for OPFOR and OPS GP are the same for all types of rotations. To determine the annual requirement, the totals should be multiplied by the number of rotations in a given year.

Table 10–3
NTC Rotational Requirements: BLUEFOR (Live Five)

		TYPE OF ROTATION		
DODIC	Nomenclature	Standard	HVY/LT	ACR
A059	Ctg, 5.56-mm BALL	19920	33528	19920
A063	Ctg, 5.56-mm TRACER	3000	5100	2000
A064	Ctg, 5.56-mm /AR	22200	40700	22000
A131	Ctg, 7.62-mm 4:1	24960	78000	24960
A520	Ctg, .50 CAL M85	1200	1200	1200
A557	Ctg, .50 CAL M2	36000	42240	36000
A896	20-mm Cobra 1	2000	2000	2000
A940	Ctg, 25-mm AP-T	6200	6200	6200
A976	Ctg, 25 -mm TP-T	6700	6700	6700
B120	Ctg, 30-mm TP[1]	7500	7500	7500
B519	Ctg, 40-mm TP-T	88	151	88
B535	Ctg, 40-mm WHITE Star Para	23	49	23
B584	Ctg, 40-mm MK 19	0	990	0
B627	Ctg, 60-mm Illum	0	90	0
B630	Ctg, 60-mm Smk	0	39	0
B632	Ctg, 60-mm HE	0	546	0
C226	Ctg, 81-mm Illum	84	139	84
C256	Ctg, 81-mm HE	0	243	0
C445	Ctg,105-mm HE	0	870	0
C449	Ctg,105-mm Illum	0	50	0
C452	Ctg,105-mm Smk	0	150	0
C623	Ctg, 120-mm HE	300	300	300
C784	Ctg, 120-mm TP-T	480	480	540
C785	Ctg, 120-mm TPCDS-T	600	600	720

Table 10–3
NTC Rotational Requirements: BLUEFOR (Live Five)—Continued

		TYPE OF ROTATION		
DODIC	Nomenclature	Standard	HVY/LT	ACR
D505	Proj, 155-mm Illum	128	128	128
D510	Proj, 155-mm CPRHD[2]	3	3	3
D528	Proj, 155-mm Smk	200	200	250
D533	Prop Chg, RB M119	564	564	565
D540	Prop Chg, GB M3A1	903	903	1426
D541	Prop Chg, WB M4A2	2056	2056	3210
D544	Proj, 155-mm HE	3000	3000	4500
D550	Proj, 155-mm Smk WP	120	120	200
D570	Ctg, 165-mm HEP	0	6	0
D579	Proj, 155-mm RAP	72	72	120
D590	Ctg, 165-mm TP-T	0	6	0
G878	Fuze,Gren HD Prac	130	260	130
G881	GREN, HD Frag M67	0	50	0
H463	RKT, 2.75" HYDRA 70[1]	380	380	380
J143	RKT, MK 22 MICLIC	4	4	4
K051	Fuze	5000	5000	5000
K143	Mine, M18 Claymore	26	36	26
K145	Mine, M18 w/o firing device	22	22	22
K230	Mine, Training[3]	5000		
L119	Sig, Kit Pers	80	80	80
L709	Sim Tgt Hit	1500	1500	1500
L715	Sim Anti-Tank Guided Ms[l]	144	144	144
L720	Sim, Tgt Kill	500	500	500
M023	Chg Demo, comp C-4	259	259	259
M028	Demo Kit, Bangalore	2	2	2
M030	Chg Demo, 1/4 lb TNT	9	9	9
M032	Chg Demo, TNT	32	32	32
M039	Chg Demo, Crater 40 lb	20	20	20
M130	Cap Blasting, Elec	50	50	50
M131	Cap Blasting, Nonelec	470	470	470
M327	Demo, Standard Base	1395	1395	1395
M456	Cord, Detonating (ft)	3000	5000	3000
M670	Fuze, Blasting Time (ft)	727	1400	727
M757	Chg Demo, Satchel	2	2	2
M766	Igniter Fuze, Blasting	132	227	132
M913	Line Chg, MICLIC	4	4	4
M914	Inert MICLIC	1	1	1
ML03	Firing Device, Multipurs	50	50	50
MN60	Igniter Electric Match	144	144	144
N285	Fuze, MTSQ M577	328	328	378
N340	Fuze, PDM M379	3192	3192	4820
N523	Primer, Perc M82	3872	3872	5718
PA79	MSL, Hellfire[1]	20	20	20

Table 10–3
NTC Rotational Requirements: BLUEFOR (Live Five)—Continued

		TYPE OF ROTATION		
DODIC	Nomenclature	Standard	HVY/LT	ACR
PB96	MSL, TOW[1]	21	25	12

Notes:
[1] These ammunition types are only required if the rotational unit decides to deploy the appropriate weapons systems.
[2] Copperhead authorizations are based on availability and stock rotation
[3] Accounts for total annual authorized quantity.
[4] N286 or N464 can be substituted for N340 dependent upon availability.

Table 10–4
NTC Rotational Requirements: BLUEFOR (Force on Force)

		TYPE OF ROTATION		
DODIC	Nomenclature	Standard	HVY/LT	ACR
A075	Ctg, 5.56-MM BLK, AR	30096	53000	0
A080	Ctg, 5.56-MM BLK, M16	42000	63840	42000
A111	Ctg, 7.62-mm BLK	48000	75000	48000
A598	Ctg, .50 CAL BLK, M2	53600	67000	53600
A599	Ctg, .50 CAL BLK, M85	3000	3000	3000
G930	Gren, HD HC	163	207	163
G950	Gren, Smk RED	45	83	45
G955	Gren, Smk VIOLET	96	96	96
K866	Smk Pot, M5	40	40	40
L306	Sig Illum RED Star	29	33	29
L312	Sig Illum WHITE Star	151	151	151
L314	SIG Illum GREEN Star	204	204	204
L367	Sim Anti-tank (ATWESS)	3185	4095	3185
L602	Hoffman	4000	5600	7200

Table 10–5
NTC Rotational Requirements: OPFOR

		TYPE OF ROTATION		
DODIC	Nomenclature	Standard	HVY/LT	ACR
A075	Ctg, 5.56-mm BLK, SAW	35000	50000	35000
A080	Ctg, 5.56-mm BLK, M16	33300	33750	33300
A111	Ctg, 7.62-mm BLK	30000	36000	30000
A598	Ctg, .50 CAL BLK, M2	20770	20770	20770
G930	Gren, HD HC	152	152	152
G940	Gren, HD GREEN	152	152	152
G950	Gren, Smk RED	24	24	24
G955	Gren, Smk VIOLET	28	28	28
K866	Smk Pot	48	48	48
L306	Sig Illum RED Star	36	36	36
L307	Sig Illum WHITE Star	91	91	91
L312	Sig Illum WHITE Para	150	150	150
L314	Sig Illum GREEN Star	269	269	269

Table 10–5
NTC Rotational Requirements: OPFOR—Continued

		TYPE OF ROTATION		
DODIC	Nomenclature	Standard	HVY/LT	ACR
L367	Sim Anti-tank (ATWESS)	4095	4095	4095
L495	Flare, Trip	3	3	3
L598	Sim, Booby Flash	9	9	9
L599	Sim, Booby Illum	9	9	9
L602	Hoffman	7360	7360	7360

Table 10–6
NTC Rotation Requirements: Operations Group

		TYPE OF ROTATION		
DODIC	Nomenclature	Standard	HVY/LT	ACR
B610	Launcher, 35-mm	14	14	14
G930	Gren, HD HC	1050	1254	1050
G940	Gren, HD GREEN	93	163	93
G945	Gren, Smk Yellow	224	334	224
G950	Gren, Smk RED	119	334	119
G955	Gren, Smk VIOLET	37	40	37
G963	Gren, HD CS 319	267	394	267
K051	Fuze, Mine	5000	5000	5000
K058	Fuse, Mine Combo	6	6	6
K180	Mine, AT M15 1	500		per year (not rotation)
K866	Smk Pot, M5, 178	188	216	188
L306	Sig Illum RED Star	58	58	58
L307	Sig Illum WHITE Star	117	122	117
L312	Sig Illum WHITE Star	288	312	288
L366	Sim, Proj Airburst	2822	5067	2822
L594	Sim, PROJ Groundburst	2688	3285	2688
L595	Sim, PROJ SPAL	2	2	2
L601	Sim, HD Gren	1853	2324	1853
L602	Hoffman	4018	4018	4018
M130	Cap, Blast Elec	50	50	50
M456	Cord, Detonating(ft)	500	500	500
M591	Dynamite	120	120	120

Notes:
[1] Accounts for total annual authorized quantity.

Table 10–7A
JRTC Rotational Requirements: BLUEFOR (Live Five)[1]

		TYPE OF EVENT					
DODIC	Nomenclature	MOUT	AMB	CSCTY	MTC	ATK	LT/HVY
A011	Ctg, .00B Buckshot	0	0	0	0	48	48
A059	Ctg, 5.56-mm BALL	0	2460	2460	2460	2460	2460
A063	Ctg, 5.56-mm	0	600	600	600	600	600
A064	Ctg, 5.56-mm AR	0	2400	2400	2400	2400	2400
A065	Ctg. 5.56-mm Plastic	7380	0	0	0	0	0
A131	Ctg, 7.62-mm 4:1	0	1200	1200	1200	1200	1200
A136	Ctg, 7..62-mm Match	0	0	0	20	20	20
A358	Ctg, 9-mm F/AT-4	0	6	6	0	0	0
A363	Ctg, 9-mm BALL	0	0	0	0	0	0
B508	Ctg, 40-mm GRN	0	0	9	9	9	9
B509	Ctg, 40-mm YLW	0	0	9	9	9	9
B519	Ctg, 40-mm TP	252	72	72	84	84	84
B535	Ctg, 40-mm WSP	40	12	12	12	12	12
B584	Ctg, 40-mm TP-T[2]	0	0	150	0	0	0
B627	Ctg, 60-mm Illum	32	16	0	0	0	0
B642	Ctg, 60-mm HE	0	28	0	20	0	0
C045	Refurb Kit, 81-mm Prac	84	0	0	0	0	0
C226	Ctg, 81-mm Illum	32	0	16	0	32	0
C445	Ctg,, 105-mm HE	0	0	0	0	264	264
C449	Ctg, 105-mm Illum	0	0	0	0	54	42
C452	Ctg, ,105-mm SMK HC	0	0	0	0	42	54
C868	Ctg, 81-mm HE	0	0	30	0	50	0
C876	Ctg, 81-mm Prac	84	0	0	0	0	0
C878	Ctg, 60-mm PRAC	0	0	0	0	0	0
C995	RKT, 84-mm AT-4	0	0	0	4	4	4
G878	Fuze, HAND GREN	360	0	0	0	0	0
G881	Gren, HD Frag	0	0	0	20	35	20
G930	Gren, Hand Smk HC	30	9	9	16	10	15
G940	Gren, Smk GREEN	20	2	2	5	5	5
G945	Gren, Hand Smk YLW	20	0	0	0	0	13
G955	Gren, Smk VIOLET	20	2	2	5	5	5
K143	Mine, APERS	0	6	0	0	3	3
K866	SMOKE POT, HC M5	3	0	0	0	4	5
L307	Sig, Illum WSC	8	2	2	4	2	4
L312	Sig, Illum WSP	8	6	7	2	8	2
L314	Sig Illum Gsc	8	2	2	4	2	4
L495	Flare, Surf Trip	30	0	6	15	30	25
L598	Sim, B/T Flash	50	0	6	25	15	0
L602	Sim, WESS	0	10	40	15	40	60
M023	Chg, DEMO C-4	0	5	5	2	5	5
M028	Demo Kit , Bangalore	0	0	0	0	2	2
M130	Cap, Blast Elec.	0	4	4	10	8	8
M131	Cap, Blast Nonelec	36	10	10	10	20	20

Table 10–7A
JRTC Rotational Requirements: BLUEFOR (Live Five)[1]—Continued

		TYPE OF EVENT					
DODIC	Nomenclature	MOUT	AMB	CSCTY	MTC	ATK	LT/HVY
M456	Cord, Detonating (ft)	300	100	100	50	150	150
M670	Fuse, Time Blast(ft)	150	50	50	50	50	50
M766	Igniter, Time Blast	36	20	10	6	20	20
N340	Fuze, PDS	0	0	0	0	264	264

Notes:
[1] Quantities are for all types of rotations.
[2] Units must provide from home station training ammunition authorizations.

Table 10–7B
JRTC Rotational Requirements: BLUEFOR (Live Five)[1]

		TYPE OF EVENT					
DODIC	Nomenclature	RAID	AA Raid	Break CNTC	Village MOUT	Hot LZ/PZ	Arty 2-Gun
A011	Ctg, .00B Buckshot	48	48	0	0	0	0
A059	Ctg, 5.56-mm BALL	2460	2460	360	2460	0	0
A063	Ctg, 5.56-mm TRACER	600	600	180	600	0	0
A064	Ctg, 5.56-mm AR	2400	2400	0	2400	0	0
A131	Ctg, 7.62-mm 4:1	1200	1200	0	1200	0	0
A136	Ctg, 7..62-mm Match	20	20	0	0	0	0
A363	Ctg, 9-mm BALL	0	0	0	100	0	0
B508	Ctg, 40-mm GRN SMK	9	9	0	19	0	0
B509	Ctg, 40-mm YLW SMK	9	9	0	9	0	0
B519	Ctg, 40-mm TP-T	84	84	0	84	0	0
B535	Ctg, 40-mm WSP	12	12	0	12	0	0
B627	Ctg, 60-mm Illum	0	0	0	16	0	0
B642	Ctg, 60-mm HE	0	0	0	28	0	0
C445	Ctg,, 105-mm HE	78	102	0	0	102	70
C449	Ctg, 105-mm Illum	24	24	0	0	24	10
C452	Ctg, ,105-mm SMK HC	18	18	0	0	18	0
C995	RKT, 84-mm AT-4	4	4	0	0	0	0
G881	Gren, HD Frag	20	20	0	48	0	0
G930	Gren, Hand Smk HC	10	10	6	10	0	0
G940	Gren, Smk GREEN	5	5	2	5	0	0
G955	Gren, Smk VIOLET	5	5	2	5	0	0
K143	Mine, APERS	3	3	0	0	0	0
K866	SMOKE POT, HC M5	1	1	0	4	0	5
L307	Sig, Illum WSC	2	2	0	2	0	0
L312	Sig, Illum WSP	7	7	4	8	0	2
L314	Sig Illum Gsc	2	2	1	2	0	0
L495	Flare, Surf Trip	10	10	10	30	0	0
L602	Sim WESS	0	0	0	10	10	10
M023	Chg, DEMO C-4	5	5	0	5	0	0
M028	Demo Kit, Bangalore	2	2	0	0	0	0
M130	Cap, Blast Elec.	5	5	0	5	0	0

Table 10–7B
JRTC Rotational Requirements: BLUEFOR (Live Five)[1]—Continued

		TYPE OF EVENT					
DODIC	Nomenclature	RAID	AA Raid	Break CNTC	Village MOUT	Hot LZ/PZ	Arty 2-Gun
M131	Cap, Blast Nonelec	10	10	0	10	0	0
M456	Cord, Detonating (ft)	50	50	0	50	0	0
M670	Fuse, Time Blast(ft)	50	50	2	50	0	0
M766	Igniter, Time Blast	7	7	0	7	0	0
N340	Fuze, PDS	78	102	0	0	102	70

Notes:
[1] Quantities are for all types of rotations.
[2] Units must provide from home station training ammunition authorizations.

Table 10–8
JRTC Rotational Requirements: ARMOR ELEMENT LT/HVY (LIVE FIRE)

		TYPE OF EVENT	
DODIC	Nomenclature	M1A1/A2	M3
A131	Ctg, 7.62-MM 4:1	1000	1600
A143	Ctg, 7.62 BALL	1000	0
A557	Ctg, 50 CAL 4:1	2400	0
A940	Ctg, 25-mm TPDS-T[2]	0	360
A976	Ctg, 25-mm TP-T[2]	0	240
C784	Ctg, 120-mm TP-T	44	0
C785	Ctg, 120-mm TPCSDS-T	24	0
G978	Gren, SMK Screen RP[2]	16	16
PV04	TOW Practice[2]	0	4

Notes:
[1] All quantities reflect ammunition per vehicle.
[2] If available, otherwise, units desiring to fire 25-mm and missiles, must use home-station training ammunition.

Table 10–9
JRTC Rotational Requirements: Aviation (Live Fire)

		TYPE OF ROTATION					
DODIC	Nomenclature	LT/HVY	AA RAID	HOT LZ/PZ	RAID	MOUT	JAAT
APACHE/COBRA							
A896	Ctg, 20-mm TP	1500	0	0	0	0	600
B120	Ctg,30-mm TP	1500	0	0	0	0	1320
H975	RKT 2.75 in Practice	14	0	0	0	0	14
PV04[1]	TOW PRACTICE	3	0	0	0	0	0
PA79	HELLFIRE[1]	12	0	0	0	0	0
KIOWA							
A557	Ctg,50 CAL 4:1	2000	2000	2000	0	0	0
H975	RKT 2.75 in Practice	14	14	14	0	0	14
PA79	HELLFIRE[1]	12	0	0	0	0	0
BLACKHAWK							
A131	Ctg,7.62-mm 4: 1	0	1600	0	1600	0	0

Notes:
[1] If available, otherwise, units desiring to fire missiles must use home-station training ammunition.

Table 10–10
JRTC Rotational Requirements: FORCE ON FORCE

		TYPE OF ROTATION
DODIC	Nomenclature	Standard Rotation
A010	Ctg, 10 GA BLK, Shotgun	3000
A075	Ctg, 5.56-mm BLK, AR	137000
A080	Ctg, 5.56-mm BLK, M16	446000
A111	Ctg, 7.62-mm BLANK LKD	134000
A598	Ctg, .50 CAL BLK, M2	30000
G930	Gren, HD HC	406
G940	Gren, HD GREEN	296
G950	Gren, Smk RED	68
G955	Gren, Smk VIOLET	396
K866	Smk Pot	100
L306	Sig Illum RED Star	58
L307	Sig Illum WHITE Star	308
L312	Sig Illum WHITE Para	300
L314	Sig Illum GREEN Star	470
L367	Sim Anti-tank (ATWESS)	3200
L495	Flare, Trip	590
L598	Sim, Booby Flash	270
L599	Sim, Booby Illum	364
L600	Sim, Booby Whistle	600
L602	Hoffman	1200
ML03	Firing, Demo	300
M131	CAP, Blast Nonelec	200
M456	DET, CORD	2500
M670	FUZE,Time Blast	250
M766	Igniter, Time Blast	250

Table 10–11
JRTC Rotational Requirements: OPFOR

		TYPE OF ROTATION
DODIC	Nomenclature	Standard Rotation
A075	Ctg, 5.56-mm Blank	33200
A080	Ctg, 5.56-mm Blank	102300
A111	Ctg, 7.62-mm Blank	31000
A598	Ctg, .50 CAL Blank	7800
G930	Gren, HD HC	96
G940	Gren, HD GREEN	100
G950	Gren, Smk RED	10
G955	Gren, Smk VIOLET	100
G963	Gren HD, CS	64
L306	Sig Illum RED Star	7

Table 10–11
JRTC Rotational Requirements: OPFOR—Continued

		TYPE OF ROTATION
DODIC	Nomenclature	Standard Rotation
L307	Sig Illum WHITE Star	307
L312	Sig Illum WHITE Para	50
L314	Sig Illum GREEN Star	100
L367	Sim Anti-tank (ATWESS)	300
L495	Flare, Trip	72
L598	Sim, Booby Flash	20
L599	Sim, Booby Illum	45
L600	Sim, Booby Whistle	100
L602	Hoffman	600

Table 10–12
JRTC Rotational Requirements: Operations Group

		TYPE OF ROTATION
DODIC	Nomenclature	Standard Rotation
G930	Gren, HD HC	37
G945	Gren, HD YELL	105
G950	Gren, Smk RED	40
K866	Smk Pot, M5	10
L306	Sig Illum RED Star	15
L312	Sig Illum WHITE Star	12
L495	Flare, Trip	63
L598	Sim, Booby Flash	20
L601	Sim, Gren HD	300
L602	Hoffman	100
L709	Sim Tgt Hit	450
L715	Sim Anti-Tank Guided Ms[l]	200
L720	Sim Tgt Kill	255
MN60	Tgniter Electric Match	450
M130	Cap, Blast Elec.	40
M131	Cap, Blast Nonelec	20
M456	Cord, Detonating (ft)	1000
M670	Fuze, Time (ft)	100
M766	Igniter, Time Fuze	10

Table 10–13
JRTC Rotational Requirements: Fire Markers

		TYPE OF ROTATION
DODIC	Nomenclature	Standard Rotation
G930	Gren, HD HC	280
G945	Gren, HD YELL	25
G950	Gren, Smk RED	5

Table 10–13
JRTC Rotational Requirements: Fire Markers—Continued

		TYPE OF ROTATION
DODIC	Nomenclature	Standard Rotation
K866	Smk Pot, M5	30
L306	Sig Illum RED Star	10
L312	Sig Illum WHITE Star	150
L366	Sim, Airburst	2760
L594	Sim, Groundburst	2760
L599	Sim, Booby trap, Illum	75
L601	Sim, Gren HD	340
L602	Hoffman	70

Table 10–14
JRTC Rotational Requirements: Air Force Controllers

		TYPE OF ROTATION
DODIC	Nomenclature	Standard Rotation
G930	Gren, HD HC	100
L312	Sig Illum WHITE Star	30
L366	Sim, Airburst	180
L594	Sim, Groundburst	100

Appendix A
References

Section I
Required Publications

AR 350–41
Training in Units. (Cited in paras 1-1*a*, 5-1*d* and 5-10*b*.)

Section II
Related Publications

A related publication is merely a source of additional information. The user does not have to read it to understand the regulation.

AR 190–58
Personal Security

AR 220–1
Unit Status Reporting

AR 350–1
Army Training

ARTEP 1–385–MTP
Mission Training for the Attack Helicopter Battalion

ARTEP 5–145–MTP
Mission Training for the Headquarters and Headquarters Company Engineer Battalion Heavy Division/Corps

ARTEP 5–402–33–MTP
Mission Training for the Engineer Groups and Brigades

ARTEP 5–415–MTP
Mission Training for the Headquarters and Headquarters Company, Engineer Battalion, (Combat Heavy)

ARTEP 5–605–MTP
Mission Training for the Headquarters Company, Engineer Topographic Battalion

ARTEP 7–7J–DRILL
Battle Drills for the Bradley Fighting Platoon, Section, and Squad

ARTEP 7–8–Drill
Battle Drills for the Infantry Rifle Platoon and Squad

ARTEP 7–8–MTP
Mission Training Plan for the Infantry Rifle Platoon and Squad

ARTEP 7–10–MTP
Mission Training Plan for the Infantry Rifle Company

ARTEP 7–20–MTP
Mission Training Plan for the Infantry Battalion

ARTEP 7–90–Drill
Drills for the Infantry Mortar Platoon, Section, and Squad

ARTEP 7–90–MTP
Mission Training Plan for the Infantry Mortar Platoon, Section and Squad

ARTEP 7–91–Drill
Drills for the Antiarmor (TOW) Company/Platoon/Section

ARTEP 7–91–MTP
Mission Training Plan for the Antiarmor Company/Platoon/Section

ARTEP 7–92–MTP
Mission Training Plan for the Infantry Scout Platoon/Squad and Sniper Team

ARTEP 44–117–11–Drill
Drills for the Stinger Teams

ARTEP 44–117–11–MTP
Mission Training Plan for the ADA Platoon, Stinger

ARTEP 44–117–21–Drill
Drills for an Avenger Squad

ARTEP 44–117–21–MTP
Mission Training Plan for the Avenger Platoon

ARTEP 44–177–14–Drill
Drills for a Bradley Stinger Fighting Vehicle Squad

ARTEP 44–177–14–MTP
Mission Training Plan for an ADA Platoon Bradley Stinger Fighting Vehicle

ARTEP 44–635–MTP
Mission Training Plan for an ADA Battalion, Patriot

ARTEP 44–635–11–Drill
Patriot Crew Drills for Electric Power Plant (EPP) and Antenna Mast Group (AMG)

ARTEP 44–635–12–Drill
Patriot Drills for Information and Coordination Central (ICC), with Electric Power Unit II (EPU II) and Communications Relay Group

ARTEP 44–635–13–Drill
Patriot Crew Drills for Engagement Control Station (ECS) and Radar Set (RS)

ARTEP 44–635–14–Drill
Patriot Crew Drills for Launching Station (LS) and Reload

ARTEP 44–637–30–MTP
Mission Training Plan for an ADA Battery, patriot

ARTEP 71–1–MTP
Mission Training Plan for the Tank and Mechanized Infantry Company and Company Team

ARTEP 71–2–MTP
Mission Training Plan for the Tank and Mechanized Infantry/ Battalion Task Force

CID Reg 195–1
Operational Procedure HQDA USA Criminal Investigation Command, ATTN: CIOP-PP, 6010 Sixth Street, Fort Belvoir, VA 22060-5506

DEP 9–1375–218–12
Wide Area Mines

DEP 9–1395–200–10
Selected Light Antitank Mine

FM 1–100
Army Aviation Operations

FM 1–140
Helicopter Gunnery

FM 5–34
Engineer Field Data

FM 5–100
Engineer Operations

FM 5–250
Explosives and Demolitions

FM 6–50
Tactics, Techniques, and Procedures for the Field Artillery Cannon Battery

FM 7–7
The Mechanized Infantry Platoon and Squad (APC)

FM 7–7J
Mechanized Infantry Platoon and Squad (Bradley)

FM 7–8
Infantry Platoon and Squad

FM 7–10
The Infantry Rifle Company

FM 7–20
The Infantry Battalion

FM 10–1
Quartermaster Principles

FM 17–12–1
Tank Gunnery, M1

FM 17–12–1–1
Tank Gunnery (Abrams) Vol I

FM 17–12–1–2
Tank Gunnery (Abrams) Vol II

FM 17–12–7
Tank Combat Training Devices

FM 17–95
Cavalry Operations

FM 17–98
Scout Platoon

FM 19–10
The Military Police Law and Order Operations

FM 20–32
Mine/Countermine Operations

FM 23–1
Bradley Gunnery

FM 23–9
M16A1 and M16A2 Rifle Marksmanship

FM 23–10
Sniper Training

FM 23–14
M249 Light Machine Gun in the Automatic Rifle Role

FM 23–23
Antipersonnel Mine M18A1 and M18 (Claymore)

FM 23–24
Dragon Medium Antitank Assault Weapon, M47

FM 23–25
Light Antiarmor Weapons

FM 23–27
MK-19, 40-mm Grenade Machine Gun, MOD 3

FM 23–30
Grenades and Pyrotechnics Signals

FM 23–31
40-mm Grenade Launchers M203

FM 23–34
TOW Weapon System

FM 23–35
Combat Training with Pistols and Revolvers

FM 23–41
Submachine Guns, Caliber .45 M3 and M3A1

FM 23–65
Browning Machine Gun Caliber .50 HB, M2

FM 23–67
Machine gun, 7.62-mm, M60

FM 23–90
Mortars

FM 23–91
Mortar Gunnery

FM 25–101
Battle-Focused Training

FM 44–8
Small Unit Self-Defense Against Air Attack

FM 44–18–1
Stinger Team Operations

FM 44–43
Bradley Stinger Fighting Vehicle for Platoon and Squad Operations

FM 44–44
Avenger Platoon, Section, and Squad Operations

FM 44–63
FAAD/SHORAD Battalion Heavy Operations

FM 71–1
Tank and Mechanized Infantry Company Team

FM 71–2
The Tank and Mechanized Infantry Battalion Task Force

FM 90–10 (HTF)
Military Operations on Urbanized Terrain (MOUT)

FM 90–10–1
An Infantryman's Guide to Combat in Built-Up Areas

FM 100–5
Operations

TC 5–117
Combat Engineer Vehicle Operations

TC 5–250
Demolition Effects Simulator

TC 25–6
Force-on-Force Collective Training Using the Tactical Engagement Simulation Training System

TC 25–8
Training Ranges

FKSM 17–12–7–1
Conduct of Fire Trainer Training Strategy Comdt, USAARMC, ATTN: ATZK-SBE, Fort Knox, KY 40121-5200

STP 7–11C14–SM–TG
Soldiers Manual, Skill Levels 1/2/3/4, and Trainer's Guide, MOS 11C, Indirect Fire Infantryman

STP 7–11H14–SM–TG
Soldiers Manual, Skill Levels 1/2/3/4, and Trainer's Guide, MOS 11H, Heavy Antiarmor Weapons Infantryman

STP 7–11M14–SM–TG
Soldiers Manual, Skill Levels 1/2/3/4, and Trainer's Guide, MOS 11M, Fighting Vehicle Infantryman

STP 19–95B1–SM
Soldiers Manual, MOS 95B, Military Police, Skill Level 1

STP 21–1–SMCT
Soldiers Manual of Common Tasks, Skill Level 1

TM 9–1315–252–12&P
Operator's and Unit Maintenance Manual (including repair parts and special tools lists) for Cartridge 81-mm; Target Practice (Short Range), M880

TM 43–0001–28
Army Ammunition Data Sheets for Artillery Ammunition: Guns, Howitzers, Mortars, Recoilless Rifles, Grenade Launchers, and Artillery Fuzes

Section III
Prescribed Forms
This section contains no entries.

Section IV
Referenced Forms
This section contains no entries.

Glossary

Section I
Abbreviations

Section II
Terms

AAR
after-action review

ABT
air-breathing threat

AC
Active Component

ACR
Armored Cavalry Regiment

ACT
Apache crew trainer

AD
air defense

ADA
air defense artillery

ADX
air defense exercise

ADFT
artillery direct fire trainer

AFSC
aerial fire support coordination

AG
assistant gunner

AGES
air-to-ground engagement system

AGES/AD
air-to-ground engagement system/air defense artillery

AGTS
advanced gunnery training simulator

AIT
advanced individual training

alt
altitude

AOE
Army of Excellence

AP
antipersonnel

APDS
armor-piercing, discarding sabot

AR
Army regulation, automatic rifle, Armor

armd
armored

ARNG
Army National Guard

ARTEP
Army Training and Evaluation Program

arty
artillery

ASA(RDA)
Assistant Secretary of the Army (Research, Development and Acquisition)

assgd
assigned

AT
antitank

ATHS
automatic target hand-off system

ATM
air-crew training manual

ATSC
Army training support center

ATWESS
antitank weapon effects signature simulator

AV
audiovisual, Aviation

AWESS
area weapon effects signature simulator

AWSS
area weapons scoring system

BATS
ballistic aerial target system

BCC
battery control center

BCFU

BCS
battery computer system

BCU
battery coolant unit

BFSV
Bradley fire support vehicle

BFV
Bradley fighting vehicle

BGST
Bradley Gunnery Skills Test

bilat
bilateral

blk
blank

BMNT
beginning morning nautical twilight

BMQ
basic mission qualified

BMT
basic mission trained

bn
battalion

BNCOC
Basic Noncommissioned Officers Course

BSFV
Bradley Stinger fighting vehicle

BST
basic skills trainer

BT
Bradley table

btry
battery

cal
caliber

CALFEX
combined arms live-fire exercise

CAR
carbine automatic rifle

cat
category

CATS
combined arms training strategy

Cav
Cavalry

cbt
combat

Cbt Arms
Combat Arms

CEV
combat Engineer vehicle

CFT
captive flight trainer

CFV
Cavalry fighting vehicle

CG
Commanding General

CIC
Criminal Investigations Command

CID
Criminal Investigations Division

CLU
command launch unit

CMF
career management field

CMS
combat mission simulator

CMTC
combat maneuver training center

co
company

coax
coaxial

COFT
conduct-of-fire trainer

CONUS
continental United States

CP/G
co-pilot/gunner

CPX
command post exercise

CQB
close-quarters battle

CRT
combat readiness training

CS
close support/combat support

CSA
Chief of Staff of the Army

CSE
Chaparral simulator evaluator

CSS
combat service support

CT
combat table

CTC
combat training center

ctg
cartridge

CTT
common task test

CTVT
Chaparral television trainer

CTX
company training exercise

CWEPT
cockpit, weapons and emergency procedures trainer

DA
Department of the Army

DAMO-TR
Deputy Chief of Staff for Operations and Plans (Training)

DAP
defensive armor penetration

DCSOPS
Deputy Chief of Staff for Operations and Plans

DCU-BIT
dispenser control unit built-in test

DEPEX
deployment exercise

DES
demolition effects simulator

DF
direction finding

DFTT
Dragon field tactical trainer

DGT
Dragon gunnery trainer

DIGS
digital imagery generation system

div
division

DODIC
Department of Defense Identification Code

DRF
division ready force

DVO
direct view optics

DVT
day video television

ECM
electronic countermeasures

ECP
engineering change proposal

ECS
engagement control system

EDRE
emergency deployment readiness exercise

EENT
end evening nautical twilight

ELF
eye-safe laser filter

EN
Engineer

EOCCT
end of course comprehensive test

EOD
explosive ordnance disposal

ERI
Engineering Restructure Initiative

ESSLR
eye-safe system for the laser range finder

EST
engagement skills trainer

EXEVAL
external evaluation

FA
Field Artillery

FAAD
forward area air defense

FARRP
forward area rearm and refuel point

FASCAM

FCX
fire coordination exercise

FDC
fire direction center

FFE
fire for effect

FHG
fragmentation hand grenade

FHT
field handling trainer

FIST
fire support team, full-crew integrated simulation trainer

FLIR
forward looking infrared

FM
field manual

FMQ
fully mission capable

FO
forward observer

FOFT
force-on-force trainer

FORSCOM
Forces Command

FOT
forward observer trainer

FPF
final protective fire

FPW
firing port weapon

frag
fragmentation

freq
frequency

FRTR
far range trainingground

FSE
fire support element

FSS
firing sequence simulator

FTT
field tactical trainer

FTX
field training exercise

FWS
flight and weapons simulator

GEMSS
ground emplaced mine scattering system

G/VLLD
ground/vehicular laser locator designator-evaluator

GL
grenade launcher

GMG
grenade machine gun

gnr
gunner

gp
group

gren
grenade

GSA
General Services Agency

GT
gunnery table

GTA
graphic training aid

GUARDFIST

HB
heavy barrel

HDM
Hellfire dummy missile

HE
high explosive

HE/HEPD
high explosive/point detonation

HEAT(-TPT)
high explosive antitank (target practice tracer)

HEMAT
heavy expanded mobility ammunition trailer

HG
hand grenade

HGST
Helicopter Gunnery Skill Test

HHC
Headquarters and Headquarters Company

HIPIR
high powered illuminator radar

HMG
heavy machine gun

HQDA
Headquarters Department of the Army

HMMWV
high mobility multipurpose wheeled vehicle

HTM
Hellfire training missile

ICC
information and coordination central

ICM
improved conventional munitions

IDN
initial distribution number

IFF
identification friend/foe

illum
illumination

IMTS
improved moving target simulator

IN
Infantry

IOT
integral operator trainer

IR
infrared

IRTT
infrared towed target

ITV
improved TOW vehicle

JAAT
joint air attack team

JOTC
joint operations training center

JRT
joint readiness training

JRTC
joint readiness training center

KD
known distance

LAT
live aircraft trainer

LAW
light antitank weapon

LES
launch environment simulator

LET
launch effects trainer

LFX
live-fire exercise

LID
light infantry division

LITR
low-cost indirect training round

LMG
light machine gun

LOC
line of communication

LP/C
launch pad/container

LRSD
long-range surveillance detachment

LTA
local training area

LTID
laser target interface device

MACS
multi-purpose arcade combat simulator

MACOM
major army command

MANPADS
man portable air defense system

MAPEX
map exercise

M-COFT
mobile conduct-of-fire trainer

MDI
missile miss distance indications/modernized demolition initiator

MET
meteorological

METL
mission-essential task list

METT-T
mission, enemy, troops, terrain, time, and weather

MET + VE
meteorological + muzzle velocity

MG
machine gun

MICLIC
mine clearing line charge

MILES
multiple integrated laser engagement system

MLRS
multiple launch rocket system

mm
millimeter

MMG
medium machine gun

MMS
mast mounted sight/miniature missile simulator

MOPMS
modular pack mine system

MOPP
mission-oriented protective posture

MOS
military occupational specialty

MOUT
military operations in urban terrain

MP
Military Police

MPI
mean point of impact

MPNFSC
Military Police night fire sustainment course

MRT
missile round trainer

MS
mass simulator

MSR
missile simulator round

MTA
major training area/maneuver training area

MTG-WESS
main tank gun weapons effect signature simulator

MTOE
modification table of organization and equipment

MTP
mission training plan

MTS
moving target simulator

MTSQ
mechanical time and superquick

NBC
nuclear, biological and chemical

NGB
National Guard Bureau

NSN
National stock number

NTC
National training center

nuc
nuclear

NVG
night vision goggles

OCONUS
outside continental Untied States

ONC
on call

OPFOR
opposing forces

ops
operations

ORE
operational readiness evaluation

ORS
operational readiness survey

OSUT
one-station unit training

OTS
operator trainer simulator

pam
pamphlet

P-COFT
Patriot conduct-of-fire trainer

PDD
Presidential Decision Directive

PGS
precision gunnery system

PGT
preliminary gunnery training

PGTS
precision gunnery training system

PIC
pilot in charge

plt
platoon

PNVS
pilot night vision sensor

PTA
plastic training ammunition

PTM
placed training mine (kit)

PTT
proficiency training tape

RA
reticle aim

RAAWS
Ranger antiarmor-antipersonnel weapon system

RAP
rocket assisted projective

RC
Reserve Component

RCAT
radio-controlled aerial target

RCFWT
radio-controlled fixed wing target

RCLR
recoiless rifle

RCMAT
radio controlled miniature aerial target

reg
regulation

RETS
remoted target system

RFA
rim fire adapter

rng
range, Ranger

RMP
reprogrammable microprocessor

ROM
read-only memory

RPVTS
remotely piloted vehicle target system

rqmt
requirement

RRF
Ranger ready force

SAAD
small arms air defense

SATA
safety and arming test aid

SAW
squad automatic weapon

SDSSTD
shoot/don't shoot stress training device

sec
section

sep
separate

SFV
Stinger fighting vehicle

SG
senior gunner

sim
simulator

SL
skill level

SLAM
selected lightweight attack munitions

SM
soldier's manual

SMCT
soldier's manual of common tasks

SMG
sub-machine gun

smk
smoke

SO
special operations

SOF
Special Operations Forces

SOAR
Special Operations Aviation Regiment

SOJT
special operations joint training

spt
support

sqdn
squadron

SRPPA
short-range plastic practice ammunition

SRT
sub-caliber rocket trainer, special reaction team

SRTA
short-range training ammunition

SRTR
short-range training round

SRTS
scaled-range target system

ST
special text

STLS
Stinger training launch simulator

STP
soldier training publication

STPT
Stinger troop proficiency trainer

STRAC
Standards in Training Commission

STX
situational training exercise

subcal
subcaliber

TACFIRE
tactical fire

TACT

TADS
target acquisition and designation sight

TADSS
training aids, devices, simulators and simulations

TBD

TBM
tactical ballistic missile

TC
training circular, tank commander, team chief

TCA
tactical control assistant

TCGST
Tank Crew Gunnery Skills Test

TCO
tactical control officer

TCPC
Tank Commanders Proficiency Course

TD
tactical director/training device

TDA
table of distribution and allowances

TEC
training extension course

Tel
Telfare

TEWT
tactical exercise without troops

TF
training film

TFSO
training fire support officer

TFTT
TOW field tactical trainer

TGP
TOW gunnery program

TGT
TOW gunnery trainer

THMTG
target-holding mechanism, tank gunnery

THT
tracking head trainer

TM
technical manual

tng
training

TOE
table of organization and equipment

TOT
time on target

TOW
tube-launched, optically tracked, wire-guided missile

TP
training projectile

TPCSDS-T
target practice cone stabilized discarding sabot-tracer

TPDS-T
target practice discarding sabot-tracer

TPGID
tank precision gunnery inbore device

TPT
troop proficiency trainer, target practice tracer

TRADOC
U.S. Army Training and Doctrine Command

TRC
training readiness condition

trp
troop

TSC
Training Support Center

TSFO
training set, fire observation

TSTT
training aids, devices, simulators and simulations selected task trainer

TSV
thru-sight video

TT
tactical table

TTF
time to fire

TTT
timed time on target

TWGSS
Tank Weapons Gunnery Simulation Systems

TWR
timed when ready

U-COFT
unit conduct-of-fire trainer

UNASGD
unassigned

USAARMC
United States Army Armor Center

USAR
U.S. Army Reserve

USARC
United States Army Reserve Command

USASOC
U.S. Army Special Operations Command

UV
ultraviolet

UW
unconventional warfare

VCSA
Vice Chief of Staff of the Army

VIGS
videodisc gunnery simulator

VT
videotapes

WAM
wide area mine

WP
white phosphorous

WSP
white star parachute

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